

Search history

Search 1: SFT=(drill* and hammer and fluid) (Results 9061)
Search 2: SFT=(drill* and hammer and fluid) and IC=(e21b) (Results 4111)
Search 3: SFT=(drill* and hammer and fluid and motor) and IC=(e21b) (Results 1540)

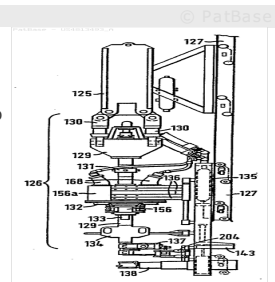
1) Family number: 2901034 (US4813493A)

HYDRAULIC TOP DRIVE FOR WELLS

Abstract: Source: US4813493A Well apparatus including a top drive assembly having a hollow drive stem driven through a gear assembly by a plurality, two or more, of hydraulic **motors**, the drive stem adapted to be attached to a well swivel at upper end and an intermediate sub or a string at the lower end, the rotary motion of the drive stem to power the string during operations. A shut off valve to shut off well **fluid** and a link adapter can be located between the lower end of the hollow drive stem and the upper end of the **drill** string. The vertical axis of the drive stem can be aligned coaxially with the vertical axis of the wellbore and with the vertical axis of the **drill** string. The top drive can be mounted to a wheeled support frame contained within two elongated members mounted in a derrick. Pivotably mounted to the support frame is a manipulator arm adapted on one end to grasp and support a tubular member and pivotable in a horizontal plane. Also mounted to the support frame is a pipe wrenching device which is extendable toward or retractable from a position coinciding with the well centerline.

Probable Assignee: TRITEN 5915 BRITTMORE ROAD HOUSTON TEXAS 77041 A C

Earliest Publication Date: 19881020



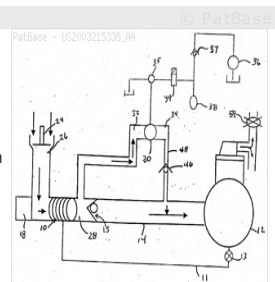
2) Family number: 30062815 (US2003215338A)

METHODS AND APPARATUS FOR UNLOADING A SCREW COMPRESSOR

Abstract: Source: US2003215338A A screw compressor is connected to a **motor** to be driven by the **motor** even during periods of low compressed air consumption. During such periods, the screw compressor is at least partially unloaded to make it easier and less costly to drive the compressor. The unloading is performed by removing air from the compressor. Preferably, that is done by communicating the air inlet of a small capacity vacuum device with the air outlet of the screw compressor. Suction from the vacuum device is transmitted to the air outlet of the screw compressor to suck air out of the screw compressor to reduce the engine horsepower needed to rotate the screw compressor. The vacuum device can also be used to boost the air volume and/or the air pressure. The system can be used in a **drilling** rig which **drills** holes in the ground. The screw compressor can be unloaded during start up of the **motor** by briefly driving the vacuum device by pressurized liquid from a pre-pressurized hydraulic accumulator.

Probable Assignee: DRILTECH MISSION LLC

Earliest Publication Date: 20031120



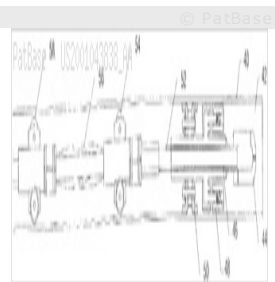
3) Family number: 30114098 (US2001043838A)

SKATE APPARATUS FOR INJECTING TUBING DOWN PIPELINES

Abstract: Source: US2001043838A A new method and apparatus have been developed which inserts and withdraws tubing from pipes without bending or kinking the tubing. Beneficially, the new method and apparatus may be employed to insert and withdraw tubing to depths greater than ever possible before. The method involves using skate apparatuses to reduce coiling and friction of the tube. Advantageously, the apparatus is portable, easily handled, and adaptable to handle tubing of differing diameters.

Probable Assignee: SUPERIOR ENERGY SERVICES LLC

Earliest Publication Date: 19990603



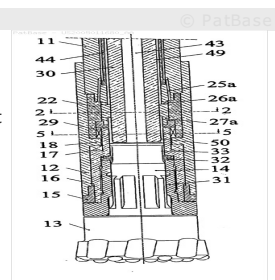
4) Family number: 30249671 (US2005011680A)

LIQUID DRIVEN DOWNHOLE **DRILLING** MACHINE

Abstract: Source: US2005011680A In a liquid downhole **drilling** machine, the guiding bushing (31) for the **drill** bit is rotatably journaled in the housing (11, 12) and, via a one-way coupling (29), coupled to a turning sleeve (22) that has axial ridges (24) that bound a number of chambers (25, 26, 27) and form turning pistons for turning the turnable sleeve to and fro. A number of these chambers are coupled to be pressurised and depressurised simultaneously with said pressure chamber (47) with the piston area (46) for urging the piston **hammer** (30) forwards. As a result, the **drill** bit (13) will be indexed a defined angle between each impact so that the button inserts of the **drill** bit will change contact points with the rock between every impact and fragment the rock efficiently. The **drill** tube is not rotated.

Probable Assignee: WASSARD AB

Earliest Publication Date: 20030615



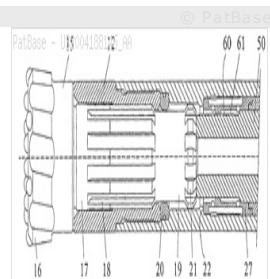
5) Family number: 31002673 (US2004188146A)

HYDRAULIC **DRILL** STRING

Abstract: Source: US2004188146A A hydraulic **drill** string device can be in the form of a percussive hydraulic in-hole **drilling** machine that has a piston **hammer** (50) with an axial through hole (51) into which a tube (35) extends. The tube forms a channel for flushing **fluid** from a spool valve (62) and the tube wall contains channels (40) with ports (41,42) cooperating with the piston **hammer** for controlling the valve.

Probable Assignee: WASSARA AB

Earliest Publication Date: 20040927



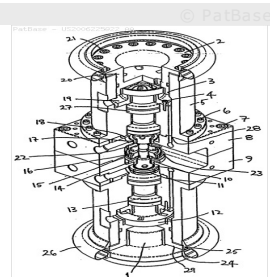
6) Family number: 31424504 (US2006225922A)

VIBRATIONAL HEADS AND ASSEMBLIES AND USES THEREOF

Abstract: Source: US2006225922A A vibrational head for vibrational **drilling** utilising a tunable hydraulic supply to each end of a shuttle in a housing from which the vibrational output is taken. Valving is by a rotary valve system into and out of the chamber. The system with a drive in/drive out capability enables easy restart and effective operation.

Probable Assignee: FLEXIDRILL LTD

Earliest Publication Date: 20041229



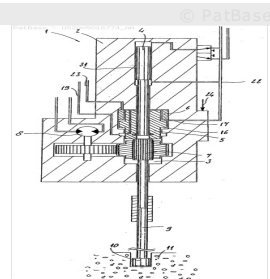
7) Family number: 29060427 (US2005016774A)

HYDRAULIC ROTARY-PERCUSSIVE **HAMMER DRILL**

Abstract: Source: US2005016774A Hydraulic rotary percussive **hammer drill** The present invention relates to a hydraulic rotary percussive **hammer drill** (1) comprising a body (2) containing a reciprocating percussion piston (4) sliding under the effect of a main hydraulic supply circuit (22), this main circuit also being intended to cause the sliding of a roughly annular abutment piston (5) housed in a cavity (3) of the body, and having, on the one hand, a front face in contact with a shank (7) and intended to place this shank a predetermined distance away from the percussion piston and, on the other hand, a rear face facing a rear wall of the cavity, characterized in that an external hydraulic supply circuit (23) is able, when the main circuit is shut down, to introduce **fluid** under pressure between the rear face of the abutment piston and the rear wall of the cavity so as to maintain a space between these items.

Probable Assignee: MONTABERT SA

Earliest Publication Date: 20030925



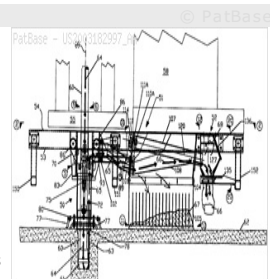
8) Family number: 29112270 (US2003182997A)

APPARATUS FOR SAMPLING **DRILL** HOLE CUTTINGS

Abstract: Source: US2003182997A A sample collection device for collecting a sample of **drill** cuttings from a hole being **drilled** as the hole is being **drilled** includes a stem collector surrounding the **drill** pipe. Pressurized air is injected through the **drill** pipe into the hole being **drilled**. The air forms a stream of air-entrained **drill** cuttings traveling up the **drill** hole during **drilling**. This stream of air-entrained **drill** cuttings is directed by the stem collector into a conduit which directs the stream of cuttings to a sampling device. The sampling device samples the stream of cuttings and creates a stream of sample cuttings which is directed to a diffuser which separates the sample cuttings from the air stream. The sample cuttings are collected in a sample container or in a sample collector from which they are transferred to a sample container or bag. The stem collector seals against the ground surrounding the hole being **drilled** to direct substantially all **drill** cuttings from the hole to the sampling device, thus substantially eliminating loss of fines prior to sampling, and the sampler is designed to collect a substantially representative sample from the cuttings stream, again substantially without loss of fines and in a device which can be mounted under the **drill** deck of a **drilling** rig.

Probable Assignee: HARRISON R COOPER SYSTEMS INC

Earliest Publication Date: 20031002



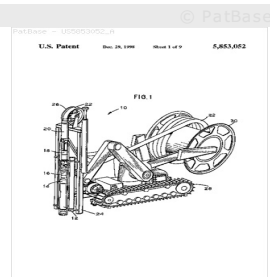
9) Family number: 29290456 (US5853052A)

HYDRAULIC DRIVE FOR ROTATION OF A ROCK **DRILL**

Abstract: Source: US5853052A The invention provides an In-The-Hole hydraulic drive unit for rotating a rock **drill**. A hydraulic **motor** having a fixed rear trailing end and a rotating front **drilling** end converts hydraulic power into a rotational drive force. The hydraulic **motor** receives high pressure hydraulic **fluid** through a receiving inlet and discharges lower pressure hydraulic **fluid** through a hydraulic outlet. A drive shaft connected to the rotating front **drilling** end is disposed within the hydraulic **motor**. A **fluid** transfer conduit within the drive shaft transfers hydraulic or pneumatic **drill fluid** to power the rock **drill**. The **fluid** transfer conduit bypasses the hydraulic **motor** for independent supply and operation of the rock **drill**. The **fluid** transfer conduit receives the **drill fluid** from the surface and transfers the **drill fluid** toward the rock **drill**. The drive shaft contains a **drill** rotator attached to the front **drilling** end adapted to receive and rotate the rock **drill**.

Probable Assignee: INCO LTD

Earliest Publication Date: 19980303



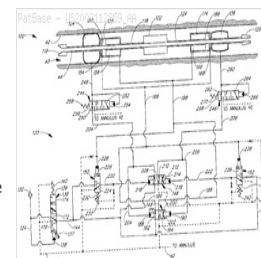
10) Family number: 30825607 (US2002112859A)

TRACTOR WITH IMPROVED VALVE SYSTEM

Abstract: Source: US2002112859A A hydraulically powered tractor includes an elongated body, two gripper assemblies, at least one pair of aft and forward propulsion cylinders and pistons, and a valve system. The valve system comprises an inlet control valve, a two-position propulsion control valve, a two-position gripper control valve, two cycle valves, and two pressure reduction valves. The inlet control valve spool includes a hydraulically controlled deactivation cam that locks the valve in a closed position, rendering the tractor non-operational. The propulsion control valve is piloted on both ends by **fluid** pressure in the gripper assemblies. The propulsion control valve controls the distribution of operating **fluid** to and from the propulsion cylinders, such that one cylinder performs a power stroke while the other cylinder performs a reset stroke. Each end of the gripper control valve is piloted by a source of high-pressure **fluid** selectively admitted by one of the cycle valves. The gripper control valve controls the distribution of operating **fluid** to and from the gripper assemblies. The cycle valves are spring-biased and piloted by **fluid** pressure in the propulsion cylinders, so that the gripper control valve shifts only after the cylinders complete their strokes. The pressure reduction valves limit the pressure within the gripper assemblies. These valves are spring-biased and piloted by the pressure of **fluid** flowing into the gripper assemblies. Some or all of the valves include centering grooves on the landings of the spools, which reduce leakage and produce more efficient operation. The propulsion control and gripper control valves include spring-assisted detents to prevent inadvertent shifting.

Probable Assignee: WWT NORTH AMERICA HOLDINGS INC

Earliest Publication Date: 20020606



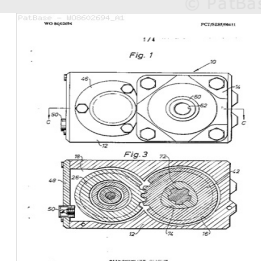
11) Family number: 31453664 (ZA8508129A)

DRILLS

Abstract: An hydraulic rock **drill** which can be used either as a rotary percussive rock **drill** or as a rotary rock **drill**. It has a pressure **fluid** chamber (90) that transmits the feeding force that is applied to the rock **drill** housing during **drilling** to the **drill** stem adaptor (58) when the **drill** is operating in the percussive mode. When the **drill** is operating in the rotary mode, the pressure **fluid** chamber is depressurized and the feeding force is instead transmitted through taper roller bearings (44).

Probable Assignee: ATLAS COPCO AB

Earliest Publication Date: 19860509



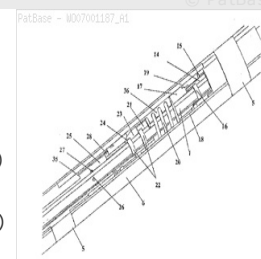
12) Family number: 34083311 (WO07001187A1)

IMPACT HAMMER FOR COILED TUBING DRILLING

Abstract: A hydraulic **hammer** is built up around an inner cylindrical string section (1) and an outer cylindrical mantle consisting of cylindrical sections (4, 6), and (8) connected to adapters (5) and (7). The impact **hammer** is driven by liquid pressure provided by choking ingoing liquid flow 10 through a nozzle (32). The liquid pressure is directed through apertures (26, 27) and acts on valve part (25) so that springs (12) and (29) are compressed building up force until valve part (17) with valve faces (19) impacts valve face (15). In this position the volume (36) is enclosed and the pressure increases so that the differential pressure acting on valve part (25) is reduced and the pressure force is overcome by the spring force of spring (29). The valve part (25) now accelerates more rapidly than valve parts (23) and (17) as the spring (29) connected to valve part (25) is more powerful than the spring (12) connected to valve parts (23) and (17) through the string section (1) and locking rings (16) and (22). Due to the greater acceleration of valve part (25) the valve faces are held open until impact against the projecting edge (34) occurs. In this position the valve faces (24) are closed, and the sequence is repeated. The impact frequency is determined by the rate of liquid input and pressure.

Probable Assignee: HAV TECHNOLOGY AS

Earliest Publication Date: 20061228



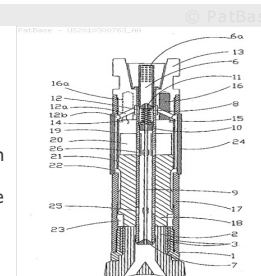
13) Family number: 41745600 (US2010300763A)

DOWN-THE-HOLE HAMMER DRILL

Abstract: Source: US2010300763A There is provided a downhole **hammer** including a **drill** bit (2) retained by short (4) and long (5) drive pins in the bore of a driver chuck (1). The chuck (1) and bit (2) shank have machined longitudinal grooves (3), every second bit shank groove being blind and connected to the adjacent open groove by a short-pin-length relief. The shorter pins (4) are inserted into the visible holes formed by the alignment of the open **drill** bit grooves and driver chuck grooves (3). The chuck (1) is then indexed which shunts the short pins (4) sideways until the longer pins (5) are insertable. The driver chuck (1) and **drill** bit (2) are engaged rotationally. The bit (2) slides by the desired distance due to the shorter pins (4) being entrapped in the blind grooves. The arrangement does not require a bit shank extension to accommodate a conventions bit retainer ring.

Probable Assignee: DRILLROC PNEUMATIC PTY LTD

Earliest Publication Date: 20080424



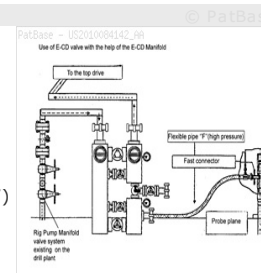
14) Family number: 42100812 (US2010084142A)

EQUIPMENT FOR INTERCEPTING AND DIVERTING A LIQUID CIRCULATION FLOW

Abstract: Source: US2010084142A Equipment for intercepting and diverting a liquid circulation flow, consisting of three flow chambers and a series of valves, said chambers, equipped with connection means with arrival or supply lines, communicating with each other, of which only one (I) communicates with both of the other two (II) (III), the communication between said chambers each being obtained by means of at least two valves of which one is a flow-rate valve (Q) and at least one equalizer (E), each equalizer valve (E) being coupled, upstream or downstream thereof, with fixed or adjustable flow-blocking devices (D), the two non-communicating chambers having a valve (V) or a three-way valve in common, or one each, a one-way valve in counterposition, one being open when the other is closed and vice versa, said valve (V) being coupled with a discharge valve (S).

Probable Assignee: ENI SPA

Earliest Publication Date: 20080809



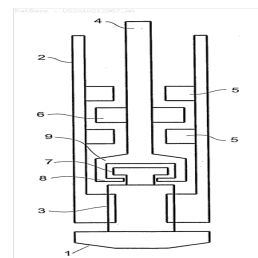
15) Family number: 42987108 (US2010212967A)

MAGNETIC HAMMER

Abstract: Source: US2010212967A **Drilling** apparatus having a **drillstring** and operable to rotate the **drillstring** and operable to provide vibration axially to the **drill** head. Relies upon vibrational apparatus positioned to provide the vibration reliant upon interactive magnetic arrays, as a consequence of the relative rotation caused by a mechanical input to at least one array or set of arrays of the vibrational apparatus. One of the arrays or sets of arrays moves synchronously, in rotation, with the **drillstring** when the **drillstring** is rotated.

Probable Assignee: FLEXIDRILL LTD

Earliest Publication Date: 20090305



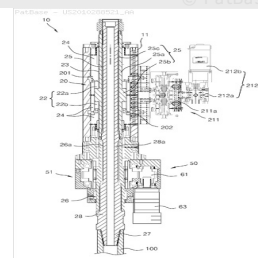
16) Family number: 43505602 (US2010288521A)

VIBRATION HAMMER

Abstract: Source: US2010288521A A vibration **hammer** is provided, including a main body; a striking unit having a piston housing installed to be elevated by a hydraulic pressure controlling valve unit installed in the main body, a **hammer** guide slidably installed on the main body to be coaxial with the piston housing, and a piston having both ends fixed to the piston housing and a **hammer** guide and elastically deformable at a predetermined angle with an elevating direction of the piston housing; and a rotating unit installed in the main body and reciprocally rotating the **hammer** guide elevated together with the piston. The vibration **hammer** can prevent the piston from being damaged by being elastically deformed when a lateral pressure applied to the rod connected to the piston.

Probable Assignee: SUK IN

Earliest Publication Date: 20090713



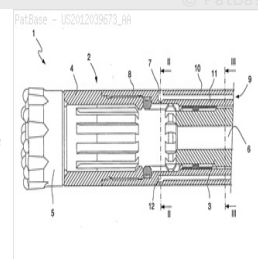
17) Family number: 46549441 (US2012039673A)

ARRANGEMENT FOR A DOWN-THE-HOLE HAMMER DRILL FOR USE IN SOIL CONSOLIDATION THROUGH JET GROUTING

Abstract: Source: US2012039673A The invention concern an arrangement for a down-the-hole **hammer drill** (1), particularly for use in soil consolidation through a process known as "jet grouting", and comprising a principally cylindrical machine housing (2), an impact mechanism (3) driven by pressurised **fluid** that, mounted in the machine housing, is arranged to give impacts onto a **drill** bit (5) fixed mounted in a chuck (4) in the machine housing in a manner that allows reciprocating motion, whereby the machine housing has a central supply line (6) for the driving **fluid** to the impact mechanism in which channels in the **drill** bit constitute outlets for used driving **fluid**. For improved efficiency during jet-grouting, the machine housing (2) is provided with a grouting nozzle (7) for jet grouting, that the grouting nozzle is directed in a sideways direction and arranged at the periphery of the wall (8) of the machine housing, that a rinsing channel (9) for conducting a grouting mixture through the machine housing to the said grouting nozzle is arranged whereby the rinsing channel for the grouting mixture is separate from the supply line for the driving **fluid** of the impact mechanism.

Probable Assignee: LKAB WASSARA AB

Earliest Publication Date: 20100810



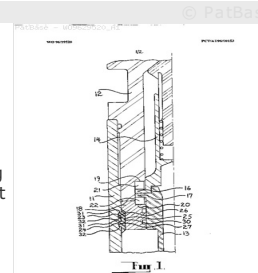
18) Family number: 8509728 (ZA9602269A)

RETENTION MEANS

Abstract: A retention means for retaining a first element (18) of circular cross section within a space of complementary cross section in a second element (11) where the retention means comprises a plurality of axially spaced annular recesses (23, 24) formed in the wall (11) of the space and a retaining ring (25) having an axial length at least equal to the spacing between the outer edges of the outermost recesses and where the radially outermost face (26, 27) is of complementary profile to the profile of the wall (11) between the outer edges. The ring (25) has an outside diameter corresponding to the diameter of the recesses (23, 24) and is in direct abutting contact with the first element (18). A particular application of the invention relates to the support for the components of a down the hole **hammer** within the casing of the **hammer**.

Probable Assignee: REAR I G

Earliest Publication Date: 19960926



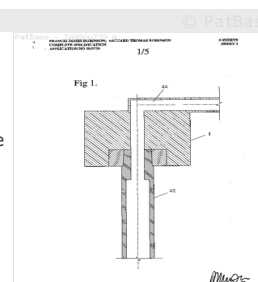
19) Family number: 8764677 (ZA9800739A)

REVERSE CIRCULATION DRILL ASSEMBLY

Abstract: Source: CA2228343A Disclosed is a reverse circulation **drill** assembly comprising: a rotation head having portion of a means for supply of **drilling fluid** to a **drill** string: a **drill** string including an outer wear sleeve and inner tube operationally connected to the rotation head and having a **drilling fluid** cavity disposed between the outer wear sleeve and inner tube; and a swivel assembly providing at least part of the operational connection of said rotation head and the **drill** string, the swivel assembly comprising: a **drilling fluid** chamber communicating the rotation head portion of the **drilling fluid** supply means of the rotation head and the **drilling fluid** cavity; a sample chamber communicating with the inner tube for recovery of cuttings from the formation, through a sample outlet formed in said sample chamber, during **drilling**; and means for connection of the swivel assembly to the **drill** string.

Probable Assignee: ROBINSON F J

Earliest Publication Date: 19980729



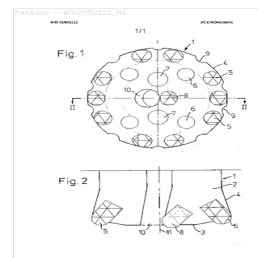
20) Family number: 14238411 (WO02052122A1)

A METHOD AND DRILL BIT FOR REDUCING THE CUTTINGS SIZE TO A PREDETERMINED MAXIMUM SIZE

Abstract: In a method for percussive **drilling** of the holes in the ground, e.g. geothermal wells, use is made of water as **drilling fluid** and of a percussive **drill** bit (1) which is arranged to crush the cuttings to such small particles that the **drilling** water can carry them along up to the surface, notwithstanding its low viscosity and density as compared to usual **drilling** mud. For this purpose the return flow channels (9) of the **drill** bit are provided with such a small depth that only particles small enough may pass. The **drill** bit is provided with several rows of hard metal buttons (5-8), whereof the outermost (5) are relatively closely spaced and, in addition, are provided with a diamond coating. The buttons (6 and 7) on the inside do not have such a coating, so that they will be worn faster than the outer buttons (5) and give warning that the **drill** bit should be replaced before the outer and dimension determining buttons (5) have been subjected to noticeable wear. An outlet (10) for **drilling fluid** is placed centrally enough in the **drill** bit to overlap with the central axis (11) thereof.

Probable Assignee: MOE PER H

Earliest Publication Date: 20020624



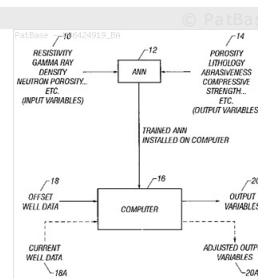
21) Family number: 15497629 (US6424919B)

METHOD FOR DETERMINING PREFERRED **DRILL BIT DESIGN PARAMETERS AND **DRILLING** PARAMETERS USING A TRAINED ARTIFICIAL NEURAL NETWORK, AND METHODS FOR TRAINING THE ARTIFICIAL NEURAL NETWORK**

Abstract: Source: US6424919B A method for selecting a design parameter for a **drill** bit is disclosed. The method includes entering a value of at least one property of an earth formation to be **drilled** into a trained neural network. The neural network is trained by selecting data from **drilled** wellbores. The data comprise values of the formation property for formations through which the **drilled** wellbores have penetrated. Corresponding to the values of formation property are values of at least one **drilling** operating parameter, the **drill** bit design parameter, and values of a rate of penetration and a rate of wear of a **drill** bit used on each of the formations. Data from the wellbores are entered into the neural network to train it, and the design parameter is then selected based on output of the trained neural network.

Probable Assignee: SMITH INT INC

Earliest Publication Date: 20011226



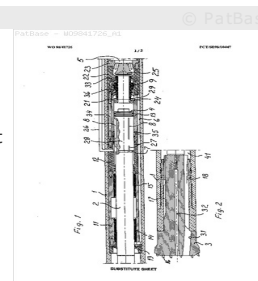
22) Family number: 20653270 (WO9841726A1)

LIQUID DRIVEN IMPACT DEVICE

Abstract: Liquid driven impact device provided with a housing (1) and a **hammer** piston (2) movable to-and-fro therein. The **hammer** piston is provided with channels (8) which when the **hammer** piston (2) passes the impact position supplies pressure liquid to a valve body (9) for locking this for continuous supply of pressure liquid to a first surface (4) on the **hammer** piston (2) and to a flushing channel (6) for continuous flushing of a **drill** hole.

Probable Assignee: ATLAS COPCO AB

Earliest Publication Date: 19980924



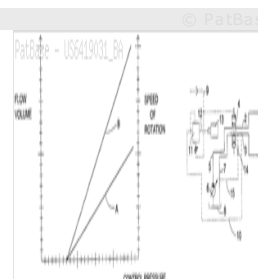
23) Family number: 20671907 (US6419031B)

METHOD OF CONTROLLING ROCK **DRILLING**

Abstract: Source: US6419031B A method of controlling rock **drilling** performed by a rock **drill** provided with a pressure-driven **hammer** and a rotation **motor**. In the method, the speed of rotation of the **drill** rod is defined on the basis of the value of the control signal used to control the control valve that adjusts the flow of the pressure **fluid** to the rotation **motor**.

Probable Assignee: SANDVIK TAMROCK OY

Earliest Publication Date: 19981214



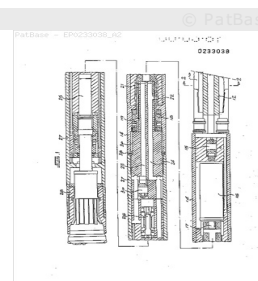
24) Family number: 23433948 (EP0233038A2)

DOWN-THE-HOLE-DRILL**.**

Abstract: Source: EP0233038A2 A down-the-hole **drill** is hydraulically powered with air flushing. The rotation **motor** (16) is on the **drill** string (10) and rotates a percussion **hammer** (20) to which the **drill** bit is chucked. Hydraulic **fluid** flows in umbilicals (11) clipped into grooves on the sides of the **drill** rods. The shuttle valve (26) for the **hammer** is in line with the piston (25).

Probable Assignee: BOART INT LTD

Earliest Publication Date: 19870804

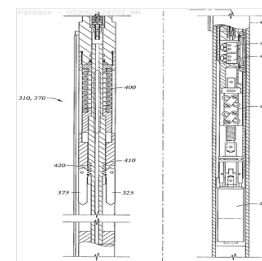


25) Family number: 28044316 (US2003024702A)

DUAL SENSOR FREEPOINT TOOL

Abstract: Source: US2003024702A An apparatus and method of determining the point at which a tubular is stuck within another tubular or a wellbore by applying a tensile or torsional force to the stuck tubular and measuring the response of various locations within the tubular. In addition, the apparatus may be combined with a cutting tool to separate the free portion of the tubular from the stuck portion.

Probable Assignee: WEATHERFORD TECHNOLOGY HOLDINGS LLC



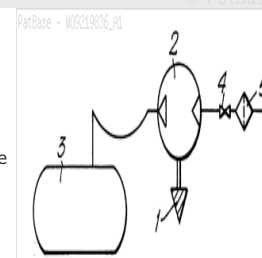
26) Family number: 28671426 (WO9219836A1)

ENGINE FOR PERFORMING SUBSEA OPERATIONS AND DEVICES DRIVEN BY SUCH AN ENGINE

Abstract: A machine for performing work at great depths utilizes the energy which is released when surrounding water masses at great hydrostatic pressure are admitted into a low pressure reservoir via a hydraulic **motor** (2). The machine uses a built-in low pressure reservoir (3) as a hydrostatic accumulator, the energy which is released when the surrounding **fluid** is admitted into the low pressure reservoir being determined by the product of the pressure difference and the internal volume of the low pressure reservoir. In a special version (Fig. 10) the machine is designed as a hydrostatic sampler which is particularly adapted for taking core samples or marine sediments on the seabed.

Probable Assignee: SELANTIC IND AS

Earliest Publication Date: 19921027



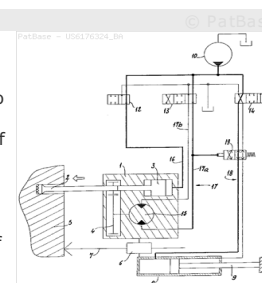
27) Family number: 28882796 (US6176324B)

DRILLING DEVICE

Abstract: Source: US6176324B **Drilling** device, of the type possessing a **drilling** unit of which the tool is driven to rotate from a hydraulic **motor** associated with an advancing device enabling a bearing force of the **drilling** unit on the ground to be created, the various actuating members being driven from at least one hydraulic pump via a set of hydraulic distributors and a set of tubes, such as hoses, the two feed tubes of the advancing device of the **drilling** system being equipped with a switch for reversing the direction of circulation of the **fluid** in the advancing device. Mounted on one of the branches of the feed circuit of the hydraulic **motor** for driving the tool in rotation is a **fluid** measurement device constantly supplying information to a compensation device for subtracting the calculated loss of head created by all the members of the circuit between two known points in that circuit, situated on either side of the **motor**, from the pressure difference measured between those same two points, the result of this operation actuating the switch for reversing the direction of circulation of the advancing **fluid** if the value exceeds a given value.

Probable Assignee: MONTABERT ETS

Earliest Publication Date: 19980522



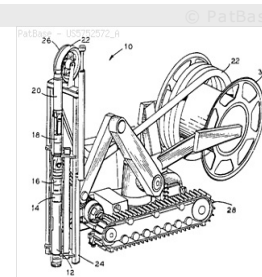
28) Family number: 29327222 (US5752572A)

TRACTOR FOR REMOTE MOVEMENT AND PRESSURIZATION OF A ROCK **DRILL**

Abstract: Source: US5752572A The invention provides a tractor for locomoting a **drilling** apparatus. The tractor includes a retractable body for transporting and pressurizing a **drill** attached to a front **drilling** end of the retractable body. The retractable body is longitudinally extended and contracted for length adjustment. A **drill** stabilizer is attached to a rear trailing end of the retractable body. The **drill** stabilizer is extended to secure said retractable body during **drilling** and retracted for allowing movement of the rear trailing end of the retractable body. A position stabilizer is attached to the front **drilling** end of the retractable body. The position stabilizer is transversely extendable against the sidewalls of the **drill** hole for periodically stabilizing the retractable body. The position stabilizer retracts for operation of the **drill** when the **drill** is stabilized with the **drill** stabilizer. The tractor travels by extending and retracting the **drill** stabilizer, extending and retracting the position stabilizer and adjusting length of the retractable body.

Probable Assignee: INCO LTD

Earliest Publication Date: 19980303



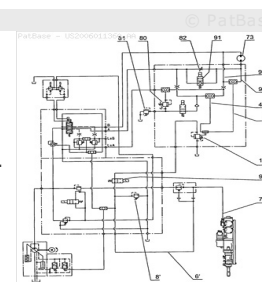
29) Family number: 30574938 (US2006011360A)

MONITORING VALVE, ROCK **DRILLING** APPARATUS AND A METHOD FOR CONTROLLING AT LEAST TWO HYDRAULIC ACTUATORS TO SUCH A MONITORING VALVE AND ROCK **DRILLING** APPARATUS

Abstract: Source: US2006011360A The invention relates to a method for controlling at least two hydraulic actuators, to a monitoring valve and a rock **drilling** apparatus. The monitoring valve (10) is connected to the input channel of a first actuator through a sensing channel (9) and controls a load-sense circuit (6') of a second actuator. The pressure of the load-sense circuit (6') is set by a force of a spring element (12) and biased by a control element (42) of the monitoring valve with differential pressure sensing.

Probable Assignee: SANDVIK MINING AND CONSTRUCTION OY

Earliest Publication Date: 20040506



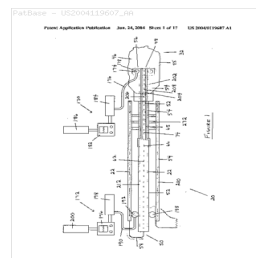
30) Family number: 30668668 (US2004119607A)

DRILL STRING TELEMETRY SYSTEM AND METHOD

Abstract: Source: US2004119607A A telemetry system and method for communicating information axially along a **drill** string comprised of a drive train supported within a housing. The system includes an axial conducting loop formed by the **drill** string for conducting an axial electrical signal embodying the information between a first axial position and a second axial position in the **drill** string, which axial conducting loop extends between the first and second axial positions. A transmitter transmits information to the axial conducting loop. The drive train includes a downhole end which extends from and is located below the housing. At least one of the first and second axial positions is located in the downhole end. The method includes the step of conducting the axial electrical signal between the first and second axial positions through the axial conducting loop which extends between the first and second axial positions.

Probable Assignee: HALLIBURTON CO

Earliest Publication Date: 20040623



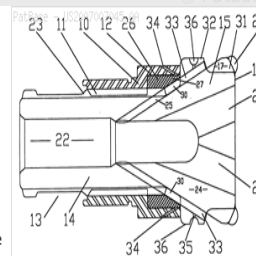
31) Family number: 31492897 (US2007007045A)

DOWNHOLE HAMMER DRILL

Abstract: Source: US2007007045A There is provided a down hole **hammer** having a drive sub or chuck (10) having splines (11), and a **drill** bit (13) having longitudinal splines (23) extending toward a bit head (15) having a bit face (16) bounded by a series of gauge row mounting portions (17), each of which has a carbide button insert (20). The bit shank splines (23) cooperate with chuck splines (11) to rotate the bit (13), the respective splines (23), (11) being proportioned to allow **hammer motor** exhaust air to pass down the splines. **Drillings** (37) are **drilled** from the termination of the spline milling, through to intersect with **fluid** passage (33) extending from sample recovery bore (22) to the bit face (16). A bore seal (32) is formed by milling a plurality of circumferential grooves (36), fed by a plurality of transverse holes (35) intersecting the air passage (33). **Fluid** passage (33) may be altered to fine tune the airflow to suit specific ground conditions, by effecting a change in diameter at point (38). The chuck (10) is provided with bleed ports (40) which direct air up the borehole when the bit is in its extended position to reduce contamination at the bit face.

Probable Assignee: DRILLROC PNEUMATIC PTY LTD

Earliest Publication Date: 20050203



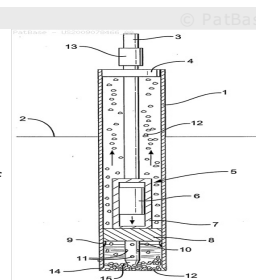
32) Family number: 32200061 (US2009078466A)

APPARATUS AND METHOD FOR DRIVING CASING OR CONDUCTOR PIPE

Abstract: Source: US2009078466A A method for driving pipe into the ground, which is particularly suitable for driving conductor pipes that are commonly installed in the hydrocarbon production industry during the construction of oil wells and gas wells, more particularly offshore wells comprises, assembling at the lower end of a **drill** string means for supporting a conductor pipe on the **drill** string, a reciprocable impact driving means, means for reciprocating the reciprocable impact driving means using **fluid** pumped through the **drill** string, an anvil capable of transferring the percussive force of the reciprocable impact driving means to the conductor pipe and means for jetting **fluid**, positioning the assembly within a conductor such that the assembly and conductor are supportable by the **drill** string and the means for jetting **fluid** is at the lower end of the conductor, positioning the lower end of the conductor pipe on the ground into which it is to be driven, (d) actuating the reciprocable impact driving means to impact the anvil and drive the conductor pipe into the ground and simultaneously or sequentially jetting **fluid** into the lower part of the conductor pipe such that it flows upwardly carrying with it particles that have been forced into the conductor pipe the **fluid** and particles being removed from the upper part of the conductor pipe.

Probable Assignee: BP PLC

Earliest Publication Date: 20061130



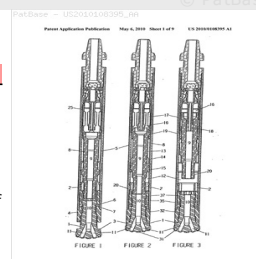
33) Family number: 34028667 (US2010108395A)

DRILL BIT ASSEMBLY FOR FLUID-OPERATED PERCUSSION DRILL TOOLS

Abstract: Source: US2010108395A The invention relates to a **drill** bit assembly for **fluid**-operated percussion **drill** tools comprising a percussion bit (1) having a head portion (3) formed with an axially extending stub shank (32). The stub shank is provided with axially extending splines (36), which are slideably engageable with complementary splines (35) formed on a drive chuck (4). Rotational drive from the chuck (4) may be transmitted to the stub shank (32) by means of the splines. Bit retaining means (6, 7, 41, 42) at the chuck are adapted for engagement with complementary retaining means (37, 51) at a spline portion of the stub shank to retain the stub shank in the **drill** bit assembly. Engagement means on the chuck (4) are adapted for connecting the chuck (4) to a drive means (5) of the **fluid**-operated percussion **drill** tool. The invention also relates to a down-the-hole **hammer** comprising an external cylindrical outer wear sleeve (5), a sliding piston (8) mounted for reciprocating movement within the outer wear sleeve (5) to strike a percussion bit (1) of a **drill** bit assembly located at the forward end of the outer wear sleeve (5) wherein the **drill** bit assembly is an assembly as described above.

Probable Assignee: MINCON INT

Earliest Publication Date: 20061101



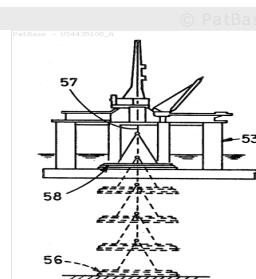
34) Family number: 4253141 (US4435108A)

METHOD OF INSTALLING SUB-SEA TEMPLATES

Abstract: Source: US4435108A A subsea template is installed by a method which includes the steps of securing the template in a position beneath the deck of a semi-submersible **drilling** vessel, moving the semi-submersible **drilling** vessel to an appropriate offshore site and subsequently lowering the template from the semi-submersible to the sea bed. In addition, at least three anchorage templates may be loaded onto one or both of the pontoons of the semi-submersible **drilling** vessel at its original position and are subsequently lowered from the pontoons to their respective locations on the sea bed after the semi-submersible has moved to the offshore site.

Probable Assignee: SEDCO INC

Earliest Publication Date: 19810728



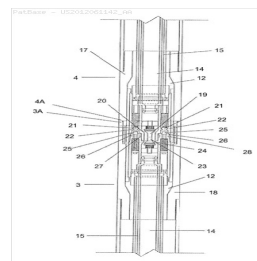
35) Family number: 44666698 (US2012061142A)

DRILLING APPARATUS

Abstract: Source: US2012061142A A **drilling** apparatus including a hydraulically powered **hammer** having a piston to impact a **drill** bit; a shuttle valve to control reciprocation of the piston; and an accumulator for hydraulic **fluid**; at least one **drill** rod having a first connection valve for connection of the **drill** rod to the connection valve of the **hammer**; and a second connection valve for connection of the **drill** rod to the first connection valve of a like **drill** rod or to a rotation device. The piston and shuttle valve are positioned substantially in-line to the axis of movement of the **hammer**. The accumulator is positioned proximate to the shuttle valve; and the first connection valve, and second connection valve having at least one poppet valve positioned proximate to a corresponding valve seat.

Probable Assignee: JFK EQUIPMENT LTD

Earliest Publication Date: 20100325



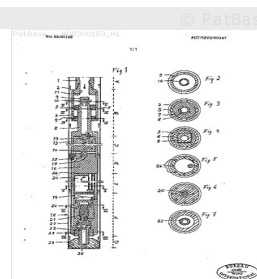
36) Family number: 4784698 (WO8300183A1)

HYDRAULIC DOWN-THE-HOLE ROCK DRILL

Abstract: Method and apparatus for **drilling** deep holes in the rock or the like. The apparatus is adapted to be attached to the end of a **drill** string (1) and be sunk to the bottom of the bore hole (27). The apparatus comprises a pilot control unit (B), a hydraulic engine (12), a hydraulic pump (16), and impact apparatus (21) and a **drill** bit (23). **Drilling** mud which is fed down through the **drill** string to flash up the cuttings drives the hydraulic engine which is of a robust construction and will withstand the abrasive **drilling** mud. The output shaft (15) of the engine drives the hydraulic pump which pumps high grade hydraulic **fluid** to the impact apparatus which is a hydraulically driven **hammer** rock **drill** of known construction. The impact piston strikes against the **drill** bit. The whole apparatus is rotated by means of a rotary machine placed on the ground level. Due to the pilot control unit (B) the apparatus only has to carry its own dead weight and openings and valves provide a bypass and stopping, respectively, of the **drilling** mud.

Probable Assignee: NYMAN KARL ERIK

Earliest Publication Date: 19830114



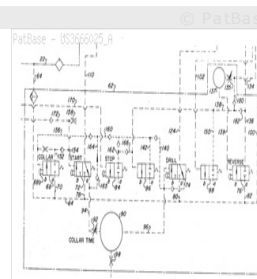
37) Family number: 1008647 (US3666025A)

COLLARING TIMING CONTROL SYSTEM FOR ROCK DRILLS

Abstract: Source: US3666025A An automatic control system for a guide shell mounted rock **drill** including a control circuit having pneumatically operated valves for providing pressure **fluid** to the **drill** **hammer**, rotation **motor** and feed **motor** and for controlling **drill** hole flushing medium. Sensors mounted on the **drill** guide shell provide for reversal of the feed **motor** and reduced **drill** power upon reaching the forward end of the guide shell, and shutdown of the **drill** upon reaching the rearward end of the guide shell. The control circuit includes a series of control valves for selection, at will, by the **drill** operator of a particular operating sequence or condition of the **drill**. A control valve is included for providing an operating sequence which includes operation of the **drill** at reduced power for a predetermined period of time for collaring a **drill** hole. The control system also includes pressure proportioning valves for automatically regulating the feed **motor** pressure to be proportional to the **drill** percussion **motor** supply pressure.

Probable Assignee: GARDNER DENVER CO

Earliest Publication Date: 19701218



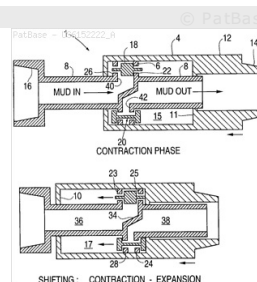
38) Family number: 10126815 (US6152222A)

HYDRAULIC DEVICE TO BE CONNECTED IN A PIPE STRING

Abstract: Source: US6152222A PCT No. PCT/NO97/00146 Sec. 371 Date Feb. 1, 1999 Sec. 102(e) Date Feb. 1, 1999 PCT Filed Jun. 6, 1997 PCT Pub. No. WO97/46787 PCT Pub. Date Dec. 11, 1997A vibration-generating device for a pipe string includes a hydraulic cylinder barrel, a hydraulic piston, changeover valves, and a double tubular piston rod. Each of the changeover valves is automatically shiftable. **Fluid** flows through the piston rod, changeover valves, and cylinder barrel.

Probable Assignee: RESERVOIR GROUP LTD

Earliest Publication Date: 19971208



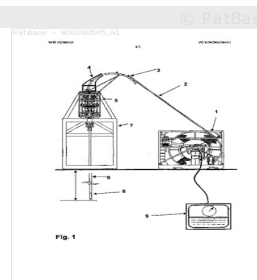
39) Family number: 14236946 (WO0248505A1)

AN ARRANGEMENT AND METHOD FOR DRILLING WITH OPTIMAL PENETRATION RATE

Abstract: This invention relates to a method and arrangement for **drilling** in the subsurface. The **drilling** is done with a rock-**drilling** **hammer**, and, according to the invention, the pressure is measured in the **drill** **fluid** that is circulated in the borehole. by controlling the feed of **drill** string into the hole as a function of the pressure, the **drilling** **hammer** will be forced towards the bottom in the borehole with an optimal high force.

Probable Assignee: MOE PER H

Earliest Publication Date: 20020612



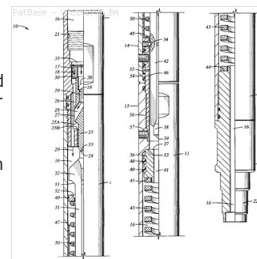
40) Family number: 14955796 (US6182775B)

DOWNHOLE JAR APPARATUS FOR USE IN OIL AND GAS WELLS

Abstract: Source: US6182775B A downhole jar apparatus for use in oil and gas wells provides an improved construction that features a movable piston that imparts upward blows to the tool body during use. The apparatus includes an elongated tool body having upper and lower end portions and a longitudinal flow bore for enabling **fluid** to pass from the upper end of the tool body to the lower end portion thereof. A pair of pistons are slideably mounted within the tool body including an upper piston having a seat and a lower piston having a seat. A ball valving member is used to seal the upper piston, that ball valving member being pumped down through a work string such as a coiled tubing unit in order to reach the seat of the upper piston. A second valving member in the form of an elongated dart is disposed in between the two pistons. A trip mechanism separates the second valving member from the lower piston when a predetermined hydrostatic pressure value is overcome. Once the second valving member and lower piston are separated, the second piston is fired upwardly striking an anvil portion of the tool body to create the upward jar or blow.

Probable Assignee: BAKER HUGHES INC

Earliest Publication Date: 19991210



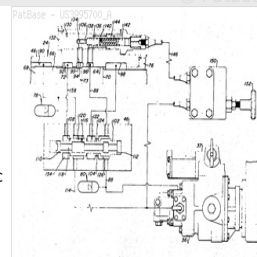
41) Family number: 1513813 (US3995700A)

HYDRAULIC ROCK **DRILL** SYSTEM

Abstract: Source: US3995700A In a hydraulic percussion rock **drill** the operation of the working **fluid** distributing valve is controlled to effect a variation in percussive blow energy and blow frequency by varying the piston **hammer** stroke. Actuation of the distributing valve is controlled by a remote controlled hydraulically actuated pressure control valve interposed in a **fluid** passage which conducts hydraulic **fluid** from the **hammer** bore to actuate the distributing valve. Substantially infinite variation of **hammer** impact blow energy between high and low limits provides for selecting the maximum penetration rate of the **drill** for any type of rock conditions. The hydraulic rock **drill** is connected to a source of hydraulic **fluid** supplied to the **drill** at substantially constant **fluid** power by a variable displacement constant power hydraulic pump.

Probable Assignee: REEDRILL CORP

Earliest Publication Date: 19761207



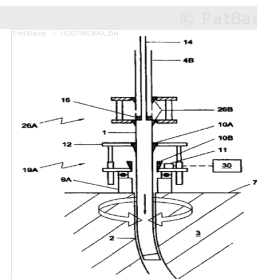
42) Family number: 15305511 (US6796390B)

METHOD AND DEVICE FOR MOVING A TUBE IN A BOREHOLE IN THE GROUND

Abstract: Source: US6796390B A tube (1) in a borehole (2) in the ground (3) is displaced. The tube is simultaneously displaced along and about its axis, such that it is axially introduced into or retracted from the borehole. According to the invention, displacing the composed tube about its axis comprises an oscillating movement. The invention further relates to a device for displacing a tube in a borehole.

Probable Assignee: SHELL OIL CO

Earliest Publication Date: 20010329



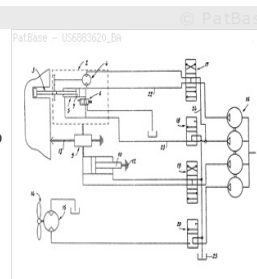
43) Family number: 15388483 (US6883620B)

DEVICE FOR HYDRAULIC POWER SUPPLY OF A ROTARY APPARATUS FOR PERCUSSIVE **DRILLING**

Abstract: Source: US6883620B A device for supplying hydraulic power to a rotary apparatus for percussive **drilling** (2) whereof the tool (3) is driven in one direction or another and subjected to the action of an impact device (6) acting independently of the rotation, of a hydraulic device (9) with forward movement enabling the tool to generate a pressure force on the ground, and optionally of a suction device (14) for the **drilling** dusts, driven by a hydraulic **motor**, the various hydraulic actuating elements being driven from a hydraulic liquid source under pressure through a hydraulic flow divider (16), a set of distributors (17, 18, 19, 20) and an assembly of branch pipes outside the apparatus, such as hose pipes. The device includes a branch pipe external to the apparatus (24) for communicating the return branch pipe (22) of the hydraulic device (4) driving the tool in rotation and the supply line (23) of the impact device (6), to add to the supply rate of the impact device the return flow rate of the rotation driving device.

Probable Assignee: MONTABERT SA

Earliest Publication Date: 20010629

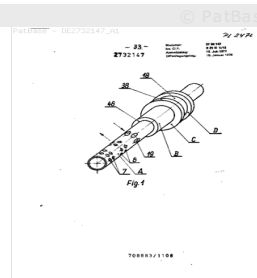


44) Family number: 1603098 (DE2732147A1)

DREH SchlagBOHRMASCHINE ROTARY PERCUSSIVE COAL **DRILL** - HAS **MOTOR** AS RING SET ON SLEEVE WITH ADJUSTABLE CONNECTIONS BETWEEN **MOTOR** AND PISTON

Abstract: Source: DE2732147A1 Patentansprüche 1 Drehschlagbohrmaschine zum Bohren von Loechern in Gestein, besonders in Kohle, die einen hydraulischen Drehmotor mit radialen Kolben und einer Kurvenscheibe zum Drehen der Bohrstange und einen hydraulischen zweiseitig wirkenden Kolben **motor**, welcher der Bohrstange Schlagenergie zuführt und coaxial mit der Bohrstange angeordnet ist, und an einer Seite im Inneren des Kolbenzylinders eine Steuermuffe enthaelt, welche zwei sesenseitig versetzte Reihen radialer ff-nungen aufweist, die oeffnungen im Zylinder gegenueberliegen, von denen die eine oeffnungsreihe mit einer den Kolbenmotor speisenden Pumpe und die andere oeffnungsreihe mit einer Ab flussleitung verbunden ist, wobei die Drehbohrmaschine zu saetztlich mit hydraulischen Speichern an der Zufuehrungs sowie an der Aflusssleitung ausgestattet ist, d a d u r c h g e k e n n z e i c h n e t, dass der Drehmotor als Ring gestaltet ist, dessen innere Oeffnung (23) auf eine Zylinder nuffe (32) aufgesetzt ist und die Steuermuffe (5) mit dem Kolben (3) mittels einer verschiebbaren Verbindung (27) verbunden ist und der Kolben (3) mittels verschiebbarer Verbindungen (22) mit dem Drehmotor verbunden ist 2. Rotary percussive coal **drill** with hydraulic **motor**, piston, rod controlling cam, percussive **motor** and a system of ports coupled to pump and offtake respectively and with hydraulic accumulators for feed and bleed lines. The rotary **motor** consists of a ring whose inside orifice is mounted on the cylindrical sleeve. The control coupling is connected to the piston through an adjustable connector and adjustable connections are provided between the **motor** and the piston. A stepped dia. axial bore is pref. fitted into the piston with the smallest dia. at the rod end, and the bore links the space between piston and connector, and similarly the inside of the **motor** through a channel to space. This is at the far end of the piston within the cylinder. Pref. a nonreturn valve in the channel between the space and the bleed line via accumulator permits flow from this space to the bleed line as required.

Probable Assignee: TS OSRODEK P K MASZYN GORNICZY



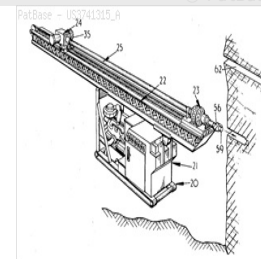
Earliest Publication Date: 19780118
45) Family number: 178309 (US3741315A)

DRILLING OR CUTTING OF EARTH STRATA

Abstract: Source: US3741315A A method and device for **drilling** in which a tool or cutting bit is subjected to an oscillatory action. It may also be subjected to a percussive, vibratory or axial thrust action.

Probable Assignee: MINING DEVELOPMENTS AG

Earliest Publication Date: 19710630



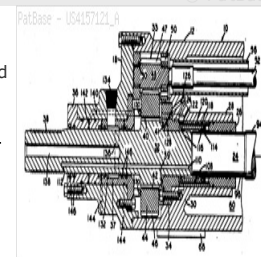
46) Family number: 19051946 (US4157121A)

HYDRAULIC POWERED ROCK DRILL

Abstract: Source: US4157121A A rock **drill** having a hydraulic pressure reservoir formed by the **drill** housing, and an anvil rotation mechanism enclosed in the housing. A piston of substantial length and a mechanical hydro-operated valve means, provide favorable pulse duration and low impact velocity. The piston has only two sliding seal diameters which permits simplified valve and cylinder configuration. The friction surfaces of the fronthead **drill** assembly are lubricated and cooled by integration with the circulating hydraulic system. A floating seal cartridge between the piston and anvil, tends to rotate the piston with the anvil to minimize rotative scrubbing at impact.

Probable Assignee: CHICAGO PNEUMATIC TOOL CO

Earliest Publication Date: 19780511



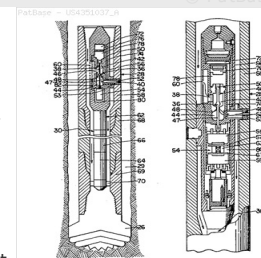
47) Family number: 2027088 (US4351037A)

SYSTEMS, APPARATUS AND METHODS FOR MEASURING WHILE DRILLING

Abstract: Source: US4351037A A method and apparatus for continuously logging while **drilling** a well bore with a rotary **drilling** rig comprising a **drill** string, a jet type **drill** bit, and mud pump means for circulating **fluid** under pressure. The apparatus generally includes means for sensing one or more downhole parameters near the **drill** bit, means for generating a sequence of electrical pulses representative of said parameter, and means for generating negative mud pressure pulses in the **drilling fluid** ("**drilling** mud") within the **drill** string in response to said electrical pulses. Receiving means at the earth's surface detect the negative mud pressure pulses and utilize the sequence of these pulses to produce signals representative of said parameter. The receiving means employ means to substantially eliminate the effects of the pressure pulsations generated by the mud pump and to extract the negative mud pressure pulses the sequence of which represent the downhole parameter. The means for generating the negative mud pressure pulses involves utilization of the existing energy on the high pressure side of the **drill** bit through a bypass to the low pressure side of the **drill** bit controlled by a valve mechanism and arrangement. The design of the valve mechanism and arrangement is such that the valve can be powered for actuation as necessary over a requisite time period by self-contained downhole power source, and is not subject to unacceptable wear.

Probable Assignee: SCHERBATSKOY S A

Earliest Publication Date: 19790606



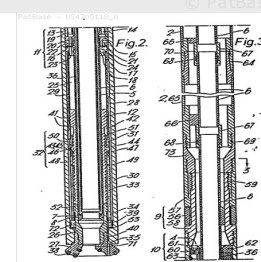
48) Family number: 2063694 (US4705118A)

HAMMER FOR USE IN A BORE HOLE AND APPARATUS FOR USE THEREWITH

Abstract: Source: US4705118A PCT No. PCT/GB85/00104 Sec. 371 Date Nov. 14, 1985 Sec. 102(e) Date Nov. 14, 1985 PCT Filed Mar. 18, 1985 PCT Pub. No. WO85/04212 PCT Pub. Date Sep. 26, 1985. Apparatus for **drilling** a bore hole comprising a **hammer** and a dual walled **drill** tube. The **hammer** comprises a reciprocable piston, **fluid** flow control device for directing **fluid** under pressure to the **hammer** to reciprocally drive the piston, and cutting device coupled to the **hammer** which rotate upon reciprocation of the **hammer** to cut the bore hole. Ratchets are coupled to the cutting device to permit rotation of the cutting means in one direction only and to prevent rotation in an opposite direction. A portion of the **fluid** under pressure is diverted to entrain and direct particulate material to the surface of the bore hole.

Probable Assignee: ENNIS M S J

Earliest Publication Date: 19850926



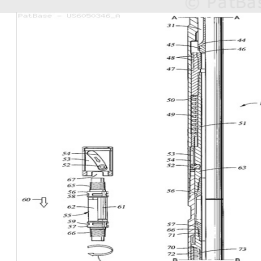
49) Family number: 20722140 (US6050346A)

HIGH TORQUE, LOW SPEED MUD MOTOR FOR USE IN DRILLING OIL AND GAS WELLS

Abstract: Source: US6050346A A improved "mud **motor**" for use in oil and gas well **drilling** includes a reciprocating valve and piston arrangement that generates power using **drilling fluid** media (e.g., **drilling** mud) pumped through an inlet port to form a differential across a piston seat. The differential pressure causes the valve and piston assembly to move down in an elongated body. Rollers then force telescoping, reciprocating fingers to rotate while absorbing the reciprocating up and down action of the valve and piston assembly. This clockwise rotation causes a transmission that includes a clutch shaft and sprags to engage a clutch housing causing the **drill** bit to turn. Thrust bearings allow weight to be applied to the tool to optimize **drilling** action. The apparatus can be used in well **drilling** or in the removal of obstructions such as bridge plugs, metal and rubber from the well bore.

Probable Assignee: BAKER HUGHES INC

Earliest Publication Date: 19990819



50) Family number: 2203815 (US4645084A)

ROBOT ARM

Abstract: Source: US4645084A A portable light weight robot arm assembly simulating shoulder, elbow, and wrist movements of a human arm, plus extensions of the upper arm and forearm, accurately positions and holds a power tool for performing driving, **drilling**, chipping, lifting and the like operations at a work-site. The assembly is self contained having a base easily and quickly mounted on a conventional truck or on the ground at the work-site, a carriage shiftable longitudinally and transversely on the base, an upright pedestal tiltable in all planes relative to the base, an extensible boom or upper arm rotatably and swingably mounted on the pedestal, and an extensible power tool suspension arm or forearm pivoted to the upper arm. Hydraulic jacks control the lowering, raising, and extension of the boom, the tilting of the pedestal, the positioning of the carriage, the extension and positioning of the forearm, and the position of the tool. An hydraulic **motor** controls the rotation of the pedestal and a hydraulic **motor** can also operate a winch on the boom. The jacks and **motor** are selectively activated from a portable station, such as a hand held switch unit, permitting freedom of movement of the operator to best observe the work. The upper arm is swung and tiltable about its shoulder on the pedestal and extended or retracted to position its outer end or elbow. The forearm is suspended on the elbow to position the tool, extended to load the tool, and the tool is held by the wrist end of the forearm in its desired position on the work.

Probable Assignee: CONST ROBOTICS INC

Earliest Publication Date: 19860827

