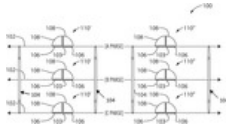
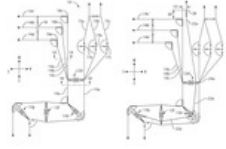
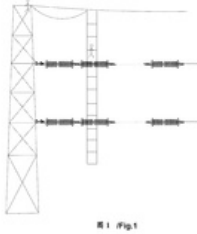
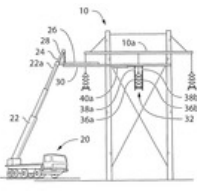
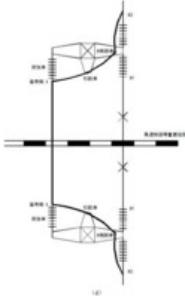
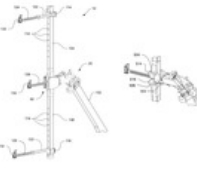
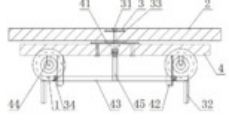
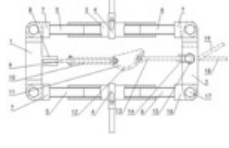
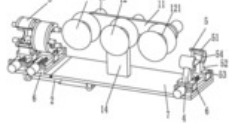


Patent families - 21 results

#	 Title	Publication number	1st app. date	Applicant/Assignee	
1.	Live conductor stringing, maintenance and repair method	EP3335285	2016-08-12	 QUANTA	100 %
The present invention relates to replacing conductors in a high-voltage power transfer system. The method provides, for example, a method for maintaining sections of electrically conductive phases in a three-phase power conductor line, wherein the three phases are parallel and spaced apart in an ordered sequence. The phases are strung between support structures and supported above the ground. Maintenance work, which include replacement or repair, is performed on sections of the three phases without interrupting a power load in any one of the three phases and without transposing the relative positions of the phases out of their ordered sequence. 					
2.	Conductor as a tool	EP3281208	2016-04-08	 QUANTA	84 %
A method of using a temporary conductor as a re-usable tool in maintaining, repairing or re-conductoring at least one energized phase, includes stringing the temporary conductor between support structures at either end of a first section, then energizing the said temporary conductor by bringing the temporary conductor to the voltage potential of the phase and electrically paralleling the temporary conductor with the energized phase, de-energizing and then maintaining, repairing or reconductoring the de-energized energized phase, re-energizing and electrically paralleling said energized phase, de-energizing and removing the temporary conductor for later re-use as the re-usable tool in a second section of the energized phase. 					
3.	Live overhaul process for ± 500 kv double-loop dc power transmission line on same tower	WO2015/078195	2013-11-27	 STATE GRID CORPORATION OF CHINA (SGCC)  STATE GRID HBEPC MAINTENANCE BRANCH  MAINTENANCE	80 %
A live overhaul process for a ± 500 kV double-loop DC power transmission line on the same tower. An operation method of entering equal potential comprises the steps of: after an equal potential worker and an earth potential worker carry insulated transmission ropes and climb to an earth wire peak and fasten safety belts, installing, by the equal potential worker and the earth potential worker, an insulated pulley and the insulated transmission ropes on the earth wire peak; transmitting, by a ground worker, an insulated flexible ladder and a hanging head of the insulated flexible ladder to the position of the earth potential worker; dismantling, by the earth potential worker, a damper of a working-side overhead earth wire, and reliably installing the hanging head of the insulated flexible ladder on the overhead earth wire; after checking the connection of various parts of screening clothing, the equal potential worker fastening an insulated protection rope, climbing to the insulated flexible ladder and fastening the safety belt to the insulated flexible ladder; and swinging, by the ground worker, the insulated flexible ladder using a tail rope of the insulated flexible ladder, and quickly reaching out for the wire to carry out potential transfer when the equal potential worker is about 0.5 m away from a live wire. The live overhaul process can improve the efficiency of line repairs.  图 1 Fig. 1					
4.	Boom mountable robotic arm	EP2789066	2012-10-05	 QUANTA  QSI	80 %
A boom mountable robotic arm for includes a beam pivotally mounted on a boom mounting adaptor, at least two electrically insulated support posts mounted to and spaced apart along the beam, and at least a first rotation coupling and a plurality of second rotation couplings. The first rotation coupling provides pivotal mounting of the beam on the boom mounting adaptor so as to provide selectively controllable rotation of the beam in a substantially vertical plane. The second rotation couplings provide selectively controllable rotation of the electrically insulated support posts about corresponding second axes of rotation between a retracted position substantially laid flush along the beam and a pick-up position ready to receive a conductor being supported. An actuated scissor linkage is mounted to the beam and the boom mounting adaptor for selectively adjusting an angular position of the beam relative to the boom mounting adaptor. 					
5.	Method for designing transmission line important crossing unit with quick repair	CN110137854	2019-06-21	 STATE NUCLEAR ELECTRIC POWER PLANNING DESIGN & RESEARCH INSTITUTE CHONGQING	79 %
The invention belongs to the technical field of transmission lines and discloses a method for designing a transmission line important crossing unit with quick repair. When a single-circuit or multiple-circuit adjacent parallel transmission line crosses over important facilities, one more phase wire is ejected as a standby phase wire in an important crossing section tower in any line, and the standby phase wire is usually operated in parallel with an adjacent phase wire or grounded. When a phase wire of a line has a disconnection accident, only broken phase wire is removed, and the impact on the important facilities over which the phase wire crosses is removed. A jumper is connected, and the broken phase wire is substituted with the standby phase wire to quickly restore power. After adopting the invention, if the important crossing section of the transmission line is disconnected, the impact on the important facilities can be quickly removed, the influence of crossing and ejecting a line again on the facilities is avoided, and the power supply can be quickly repaired and restored, which is convenient and quick and basically has no cost. 					
6.	Mobile conductor lift	WO2015/013484	2014-07-23	 FRITEL  FRITEL & ASSOCIATES	78 %
A conductor lift attachment for a boom lift of a boom truck or other vehicle. The conductor lift attachment has dual hinged crossbars supporting hinged insulator stems that support conductor holders to lift live power lines during maintenance and repair. The conductor lift attachment can be stowed along the boom, when not in use, in such a way that another boom attachment may be used on the same boom. The vehicle, boom, and attachment, taken together, are within the scope of the present invention. 					

7.	Bypass drainage tool for live-line installation of power transmission line by ground potential method and defect processing operation method thereof	CN110890715	2019-12-19	STATE GRID CORPORATION OF CHINA (SGCC) YANTAI POWER SUPPLY	73 %	
The invention relates to a bypass drainage tool for live-line installation of a power transmission line by a ground potential method and a defect processing operation method of the bypass drainage tool. The bypass drainage tool is especially suitable for the operators to process the heating defects of a power transmission line drainage plate and repair the damaged wires of the adjacent linear insulators in a live-line work manner, and belongs to the technical field of power transmission line live-line maintenance sites. The bypass drainage tool comprises a metal end A connected with a wire anda metal end B connected with a lead, the metal end A and the metal end B are connected through two insulating soft copper wires, and a direction adjusting connecting rod A and a direction adjusting connecting rod B for driving the metal end A and the metal end B to rotate are respectively mounted on the metal end A and the metal end B. The bottom of the direction adjusting connecting rod A and the bottom of the direction adjusting connecting rod B are movably installed on the insulating operating rod A and the insulating operating rod B, the metal end A and the metal end B are respectively provided with the screwing mechanisms used for clamping the wire and the lead, and the screwing mechanisms clamp or loosen the wire and the lead via the insulating screwing rods. According to the present invention, on the condition of uninterrupted power supply to a user, the heating defect of the power transmission line drainage plate can safely, reliably and quickly eliminated, and the damaged wires of the adjacent linear insulators are repaired.						
8.	Vertical double-bundled line outgoing operation platform	CN106711848	2016-12-22	HEBEI ELECTRIC POWER HENGSHUI POWER SUPPLY BRANCH OF STATE GRID HEBEI ELECTRIC POWER STATE GRID CORPORATION OF CHINA (SGCC)	71 %	
The invention relates to an overhead power transmission line operation device, and particularly relates to a vertical double-bundled line outgoing operation platform. The vertical double-bundled line outgoing operation platform comprises a pulley capable of walking on a power transmission line, and is characterized in that the top part of the body of the pulley is further provided with a rotary man-carrying platform, and the rotary man-carrying platform is rotatably connected with the top part of the body of the pulley. The top part of the rotary man-carrying platform is further provided with a line hanging control device at the central position, wherein the line hanging control device is connected with an on-off mechanism of the pulley, and the front end and the rear end of the lower side of the rotary man-carrying platform are fixedly provided with two wheel axles. The line hanging control device comprises a control switch, a line hanging hook, a reset spring and a fuse protection device. The vertical double-bundled line outgoing operation platform is simple in structure, flexible in use, compact and portable, and convenience to assemble and disassemble, can be used in compact tower line live working, solves problems of traditional line outgoing operations, and completes shakeproof hammer reset line outgoing repair work, so that the work efficiency and quality are improved, the labor intensity is reduced, the operation time is shortened, and the operation safety is ensured.						
9.	Simple tool for adjusting sag of conductor	CN110299682	2019-07-18	HAIDONG POWER SUPPLY STATE GRID CORPORATION OF CHINA	70 %	
A simple tool for adjusting the sag of a conductor relates to the technical field of transmission line operation and maintenance and overhaul. A two-way ratchet wrench is arranged on the outer circleof each connecting joint side clamp wire cylinder. A left-hand internal thread and a right-hand internal thread are respectively arranged at the two ends of each connecting joint side clamp wire cylinder, and are respectively connected with a left-hand lead screw and a right-hand lead screw. The other end of each left-hand lead screw and the other end of each right-hand lead screw are connected with connecting plates A. The upper and lower ends of a yoke plate side clamp are connected with the corresponding connecting plates A. A U-shaped clamping slot is arranged in the middle of the yoke plate side clamp. The upper end of a steel anchor clamp is connected with the corresponding connecting plate A, and the lower end of the steel anchor clamp is connected with a connecting plate B. The connecting plate B is in threaded connection with one connecting joint side clamp wire cylinder through one right-hand lead screw. The beneficial effects are as follows: the sag of a conductor can be adjusted in a charged state of a line; and the number of times of line outage for maintenance in the process of transmission line operation and maintenance and overhaul is reduced, and the reliability ofpower supply is ensured. The simple tool is light and convenient to use, greatly reduces the number of personnel required for operation and improves the maintenance efficiency.						
10.	An overhead transmission line ground conductor damage recovery device and method	CN109038359	2018-07-19	SHEN YANNAN	69 %	
The invention discloses an overhead transmission line ground wire damage recovery device and method thereof, the device comprising a bottom plate, a moving component, an arranging component, an obstacle avoidance component and a tie-down component. The moving component comprises a moving wheel, wherein a concave clamp groove for cooperating with the ground wire is arranged on the peripheral side of the moving wheel; The arranging assembly comprises an arranging disk, wherein the arranging disk is provided with an arranging hole which can be matched with the ground wire, and the arranging disk can perform spiral motion along the ground wire; The tie-down assembly includes two huggable profiles; The avoidance barrier assembly removes the arranging assembly from the ground wire. The moving assembly and the tie-down assembly are positioned on the bottom plate; The arranging component is located on the barrier avoidance component. The invention has the advantages that the extrusion reset of the ground wire can be completed, the automatic arrangement of the broken strands of the ground wire can be completed, and the repairing efficiency of the broken strands of the ground wire can be improved; hot-line work is allowed, and thus the loss of power outage maintenance is reduced; and no personnel need to be close to the grounding wire to complete the ground wire arranging, the operation issafe and efficiency is high.						
11.	Live-wire operation method for cutting off drainage wire for 35kv distribution circuit	CN101640392	2009-07-15	WUHAN KERUIDE ELECTRIC POWER TECHNOLOGY	68 %	
The invention relates to the technical field of live-wire operation of a 35kV distribution circuit, and provides an intermediate potential live-wire operation method for cutting of a drainage wire fora 35kV distribution circuit by using an insulating platform. Four types of operating personnel, including work managers, platform operating electricians, pole operating electricians and ground operating electricians coordinate with each other for operation. The operation method of the invention comprises the steps of on-site inspection of appliances, insulation shielding, cutting-off operation ofthe drainage wire, shield removing, and the like. The operation method of the invention is used for live-wire operation of emergency repair and maintenance for the 35kV distribution circuit, improvesthe power distribution reliability of a distribution network and fills the internal blank in the field of live-wire operation of the 35kV distribution circuit.						
12.	Live-wire operation method for lapping drainage wire for 35kv distribution circuit	CN101640390	2009-07-15	WUHAN KERUIDE ELECTRIC POWER TECHNOLOGY	68 %	
The invention relates to the technical field of live-wire operation of a 35kV distribution circuit, and provides an intermediate potential live-wire operation method for lapping a drainage wire for a35kV distribution circuit by using an insulating platform. Four types of operating personnel, including work managers, platform operating electricians, pole operating electricians and ground operatingelectricians coordinate with each other for operation. The operation method of the invention comprises the steps of on-site inspection of appliances, insulation shielding, lapping operation of the drainage wire, shield removing and the like. The operation method of the invention is used for live-wire operation of emergency repair and maintenance for the 35kV distribution circuit, improves the power distribution reliability of a distribution network and fills the internal blank in the field of live-wire operation of the 35kV distribution circuit.						
13.	Bypass operation method based on distribution line maintenance and matching operation device thereof	CN108899801	2018-08-07	CHINA ELECTRIC POWER RESEARCH INSTITUTE WUHAN LEAD ELECTRIC POWER TECHNOLOGY	68 %	
The invention discloses the bypass working methods safeguarded based on distribution line and its supporting operation device, operational method to be: First temporary power-off when line fault, then relaxed state is made up to tightening device tightening faulted line segment both ends among the mating conducting wire of self-locking torque arm, it is cut with trimming equipment again, and with end sleeve device entangle cut position exposed end prevent from leaking electricity, then bypass is built using connection device among conducting wire and uses bypass power supply, faulted line segment is overhauled at the same time, it is powered off again after the completion of Awaiting Overhaul, and position will be quickly cut with connection device among conducting wire and is quickly connect with the line segment both ends after maintenance, tightening device and bypass facility among conducting wire are finally withdrawn again, and restore former line powering.Construction method of the present invention has many advantages, such as easy for construction, quick, uses manpower and material resources sparingly, and can guarantee to greatest extent the personal safety of upkeep operation personnel in the case where high-tension overhead line does not have a power failure, and increase substantially upkeep operation efficiency.						
14.	Live-wire operation method for replacing insulator for 35kv distribution circuit	CN101640391	2009-07-15	WUHAN KERUIDE ELECTRIC POWER TECHNOLOGY	59 %	
The invention relates to the technical field of live-wire operation of a 35kV distribution circuit, and provides an intermediate potential live-wire operation method for replacing an insulator for a 35kV distribution circuit by using an insulating platform. Four types of operating personnel, including work managers, platform operating electricians, pole operating electricians and ground operatingelectricians coordinate with each other for operation. The operation method of the invention comprises the steps of on-site inspection of appliances, insulation shielding, control of conductor spacing, replacing operation, shield removing and the like. The operation method of the invention is used for live-wire operation of emergency repair and maintenance for the 35kV distribution circuit, improves the power distribution reliability of a distribution network and fills the internal blank in the field of live-wire operation of the 35kV distribution circuit.						