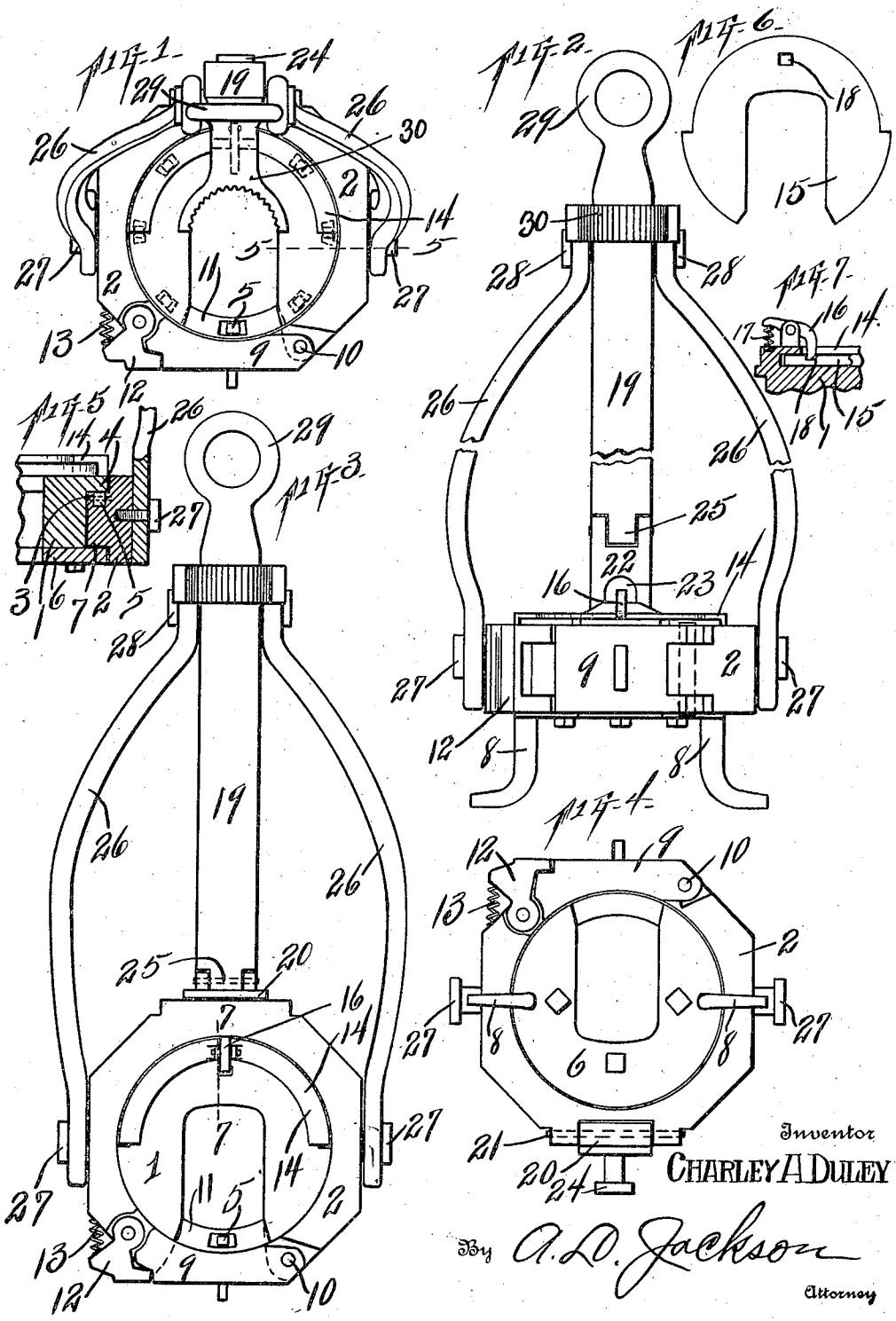
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COMBINATION SWIVEL WRENCH PLATE AND HANGER

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COMBINATION SWIVEL WRENCH PLATE AND HANGER.

Application filed March 15, 1922. Serial No. 543,831.

To all whom it may concern:

Be it known that I, CHARLEY A. DULEY, a citizen of the United States, residing at Breckenridge, in the county of Stephens and State of Texas, have invented certain new and useful Improvements in Combination Swivel Wrench Plates and Hangers, of which the following is a specification.

My invention relates to swivel wrench plates and hangers therefor; and the object is to provide a convenient tool handling device for use in mounting or installing drill bits and various fishing tools and the like which are used in oil fields and also to provide a safety hanger or handling device which will not require men to hold the handle down during certain operations hereinafter set forth. Other objects and advantages will be fully explained in the following description and the invention will be more particularly pointed out in the claims.

Reference is had to the accompanying drawings which form a part of this application.

Fig. 1 is a plan view of the wrench plate and hanger. Fig. 2 is a front elevation of the same. Fig. 3 is a front view of the hanger with the wrench plate turned down forward for removal of a bit or other tool. Fig. 4 is a bottom plan. Fig. 5 is a broken vertical section, taken on the line 5—5 of Fig. 1. Fig. 6 is a plan view of a supplemental detachable plate for use on the main swivel plate. Fig. 7 is a broken sectional view, substantially on the line 7—7 of Fig. 3.

Similar characters of reference are used to indicate the same parts throughout the several views

The swivel plate 1 is provided with a frame 2. The frame 2 has a circular opening for the plate 1 and a shoulder 3 on the upper interior side and the plate has a flange 4 for supporting the plate 1 on the shoulder 3. Antifriction rollers 5 are mounted in the shoulder 3 to prevent friction of the flange 4 on the shoulder 3. The plate 1 is prevented from leaving the seat on the shoulder 3 by a plate 6 which is bolted to the plate 1 and extends under a shoulder 7 of the frame member 2. The plate 1 is actuated for adjustment by handles 8. A door 9 is hinged to the frame 2 by a pivot bolt 10. The door 9 carries a ledge 11 which corresponds in contour to the shoulder 3 for supporting the flange 4 of plate 1 and supporting the plate 1 when the plate is being swung or turned around for adjusting purposes. This ledge 11 is provided with an antifriction roller 5. When the door 9 is closed, it is held closed by a spring-controlled detent 12. The spring 13 keeps the door locked closed. The door can be opened by pressing the detent 12 back against the tension of the spring 13.

Provision is made for adapting the plate to tools of different sizes. The plate 1 has cast thereon an L-shaped hood 14 which extends substantially one-half around the plate 1 and forms a pocket to receive a supplemental plate 15 which is similar in contour to the plate 1, but has a smaller recess for receiving tools. There may be several of such plates 15, each being of the same exterior size, but each being smaller than the other. The plate 15 is held in place by a spring dog 16 which is pivotally mounted on the hood or extension 14. A spring 17 pushes up on the back end of the dog 16 and keeps the dog pressed down into a recess 18 in the plate 15. A different plate may be placed on the plate 1 for each variation in the size of tools.

I have provided an improved means for handling the wrench plate. The improvement includes a hanger 19 which is pivotally and slidably connected to the frame 2. A block 20 is pivotally mounted in the frame by a pivot rod 21. The hanger 19 has a pivoted member 22 which has a vertical slot 23 therein. The member 22 is connected to the frame by a set screw 24 which projects through the slot 23 and into the block 20. The slot 23 permits the member 22 to slide on the bolt or set screw 24 and the joint 25 permits a folding or swinging back movement of the member 19. The hanger is provided with lateral supports 26 which are pivotally connected to the frame 2 by set screws or bolts 27 and connected to the member 19 by set screws or bolts 28. The object of the joint 25 and the block 20 connection is to permit the plate 1 with the frame 2 to be turned over on the side when the bit or other tool is to be released or installed. The hanger is supported by a chain which engages the ring or loop 29 and supports the same. This does away with the necessity of men holding the old handle of the frame down and is much less dangerous.

The installing of a bit or other tool or the taking down of the bit or other tool is made easy of accomplishment. The joint 25 and the slidable connection of the member 22 with the pivoted block are necessary because the supports 26 do not become longer when the plate is turned on the side as in Fig. 3, consequently the main hanger member must become shorter. The upper member of the hanger 19 carries a supporting guide 30. This guide supports the tool stem and wrench and is provided with teeth for this purpose and also for preventing the stems of tools from turning and dispenses with tool hooks which have been used for this purpose.

What I claim, is,—

1. A wrench plate and hanger therefor comprising a frame provided with a central recess therein, a wrench plate having a tool receiving recess therein rotatably mounted in said frame, and a hanger in sections hingedly connected together and pivotally and slidably connected to said frame.

2. A wrench plate and a hanger therefor comprising a frame provided with a central recess therein, a wrench plate having a tool receiving recess therein rotatably mounted in said frame, antifriction rollers between the bearing faces of said plate and said frame, said hanger being made in sections hingedly connected together and pivotally and slidably connected together, and a door operatively connected to said frame for preventing tools from leaving said plate.

3. A wrench plate and hanger therefor comprising a frame provided with a central recess therein and an opening through the front side, a wrench plate having a tool receiving recess therein rotatably mounted in said frame, means for holding said plate in said frame during operations consisting of upper and lower annular shoulders on the interior of said frame, a flange on said plate engaging the upper shoulder, and a plate bolted to the lower side of said plate and engaging the lower shoulder, and antifriction rollers interposed between said flange and said upper shoulder.

4. A wrench plate and a hanger therefor comprising a frame provided with a central recess therein and an opening through the front side for passage of tools, a wrench plate having a tool receiving recess therein and an opening in the side for passage of tools rotatably mounted in said frame, means for holding said plate in said frame during operations consisting of upper and lower interior shoulders on said frame, a flange on said plate engaging said upper shoulder, antifriction rollers interposed between said flange and said upper shoulder, a plate bolted to the lower side of said wrench plate and engaging said lower shoulder loosely, and a door for said frame and a spring detent therefor for holding the door closed.

5. A wrench plate and hanger therefor comprising a frame provided with a central opening and open from said opening through the front side, a wrench plate provided with a tool receiving recess rotatably mounted in said frame, a door and a spring-actuated detent therefor for locking the opening in said frame, means for adapting said plate for holding tools of different sizes consisting of a pocket formed on said plate, a supplemental plate having a smaller tool receiving recess therein mounted on said plate in said pocket, and a spring-actuated detent for holding said supplemental plate in place.

6. A wrench plate and a hanger therefor comprising a plate having a tool receiving recess therein, a frame for supporting and holding said plate in different positions, said hanger consisting of an upright member carrying a supporting guide and formed in upper and lower sections hingedly connected together and the lower section have a vertical slot therein and pivotally and slidably connected to said frame and of lateral members bolted to said upper section and pivotally connected to the sides of said frame.

In testimony whereof, I set my hand this 7th day of March, 1922.

CHARLEY A. DULEY.