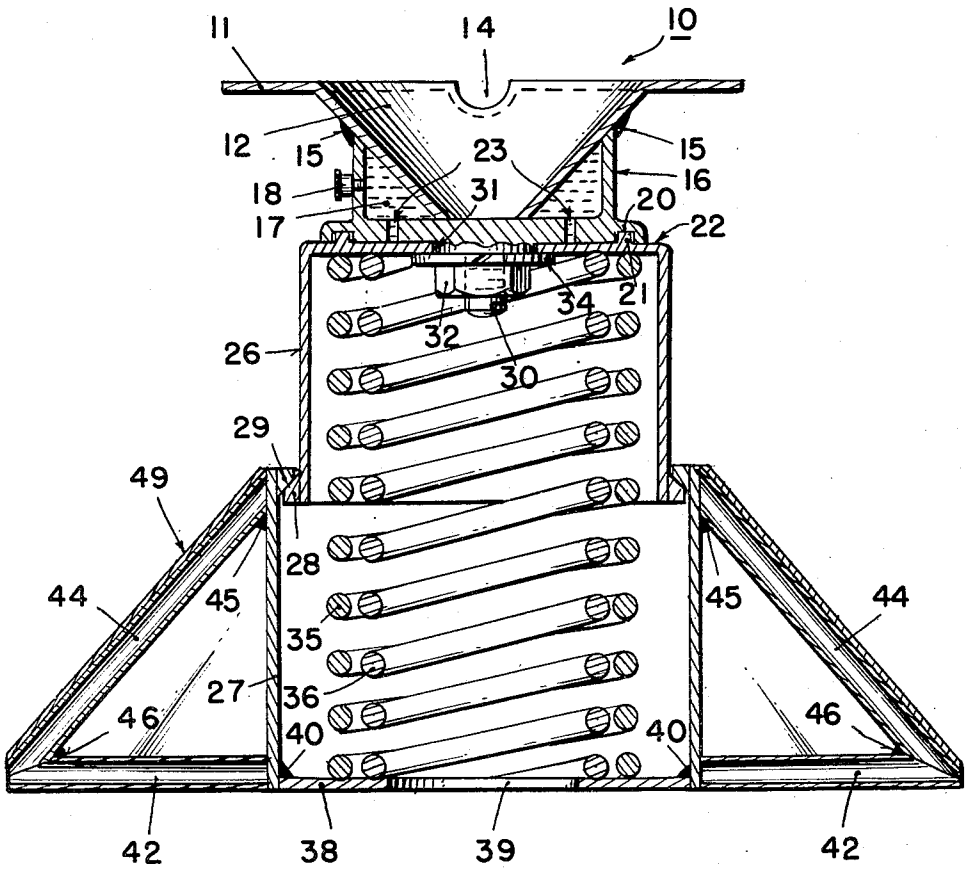
Dec. 1, 1953 V. SMOOT 2,661,188

BIT LIFTER AND STABBER

Filed Nov. 18, 1949



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Patented Dec. 1, 1953 2,661,188

UNITED STATES PATENT OFFICE

2,661,188

BIT LIFTER AND STABBER

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Application November 18, 1949, Serial No. 128,120

3 Claims. (Cl. 255—1)

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This invention relates to bit lifter-stabbers and has for its object the provision of a spring-mounted turntable upon which drilling bits, subs, and other tool joints can be placed when the lifter-stabber is centered on a drill rotary to facilitate starting the threads on a pipe hanging vertically from the derrick.

A second object of the invention is to provide a lightweight spring-mounted turntable for holding threaded members with just sufficient upward pressure to engage the member to which they are to be secured.

Other objects of the invention relate to specific details as set forth in the claims and tend toward the elimination of the difficulty and accident hazard which is present in the normal method of attaching a bit or sub to a suspended drill pipe or drill collar.

The drawing is a central section through the device.

At the present time and for many years past a bit or any other joint has been manually applied to the stem or pipe; usually by two men. These men lift the bit against the pipe as they move around the rotary-table until the threads have caught. Due to the almost invariable wet and muddy condition of both the floor and the rotary, the accident hazard is high. By the use of my bit stabber the task is considerably eased and a single worker can start a bit to the pipe with the greatest of ease. The bit lifter-stabber as now in use weighs appreciably under 100 pounds and is, therefore, readily movable and it can sit easily on a rotary-table directly beneath a drill collar or any other pipe which would normally hang vertically downward from the derrick above.

My device consists of a turntable 10, having a peripheral flat outstanding flange 11 integral with a central conical portion 12, and preferably having a pair of opposed indentations 14 across the top to allow for fish-tail bits. Secured to the turntable cone in any desired manner as by welding 15 is a grease chamber casting 16 providing a grease chamber 17 which may be filled through the grease connection 18 and an annular runway 20 at a position to engage an annular upstanding ring 21 on the base 22 of the upper portion of the stand which forms the bearing surface for the turntable 10. A plurality of perforations such as 23 permit feeding of grease to the bearing surface. This forms a thrust bearing as the unit to be added to the stem will compress the spring or springs but will hold the top of the bit or other tool joint at a level above the bottom of the suspended string of drilling means so that the workman first presses down the unit to clear the stem and to place the unit and the lifter-stabber coaxial of the stem or string. When the workman releases such pressure the spring will hold the threaded portion of the unit in firm contact with the threaded portion of the bottom piece of the stem. While in this position the workman turns the turntable and threads one piece into the other with little effort. I do not find it necessary to use balls or rollers between the turntable 10 and its base 22, and much prefer the springs illustrated to pneumatic or hydraulic means to hold the unit to be added in contact with the pipe or stem hanging vertically from the derrick in well known manner.

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The stand consists of two telescoping pieces of pipe, the upper portion being 26 and the lower portion, which may be say an inch larger in diameter, being numbered 27. I weld or otherwise secure rings 28 and 29 to the respective pieces of pipe and bevel them at their opposed ends thus forming a convenient pipe stop. The grease chamber casting has a downwardly extending screw 30 passing through a central hole 31 in the base 22 and receives a suitable nut 32. A washer 34 is preferably mounted between the nut and the base 22 of the upper and smaller pipe section 26. One or more springs, here shown as 35 and 36, press against the base 22 and the similar base 38 of the lower and larger section 27 and urges the two sections apart, thus raising the turntable. I find it quite convenient to make the lower base 38 with a very large central opening 39 for convenient access to the nut 32. This base, which is actually an annular ring, is welded to the pipe section as at 40. While the device would work as so far described, I find it very convenient to add a support which in this case consists of four equi-spaced legs each consisting of a lower section 42 secured to the bottom of the lower pipe section 27 and an upper sloping pipe section 44 welded to the section 27 as at 45 and to the horizontal leg section 42 as at 46. Obviously the legs could be of any other metal section and I use the pipe sections merely because they are readily available and it makes the device easier to handle. The conical skirt 49 enables the device to cover completely the hole in the rotary table.

As can be seen, the flange 11 of the turntable rotates freely in a horizontal plane and the upward spring action eliminates manual support, the strength of the spring 36 if used alone being well sufficient to hold the bit firmly against the bottom of the string (not shown). As the entire device, including the four legs, weighs but 55

pounds, the stabber can readily be moved to position and taken away with great ease and will permit the worker to screw the bit to the pipe while he stands in a single position.

What I claim is:

1. A portable device for facilitating the presentation of a threaded drilling stem unit to a suspended drilling stem having a cooperating threaded portion, comprising a turntable adapted to be positioned under and coaxially of the drilling stem while supporting the unit to be secured to the stem, and spring means yielding urging the turntable toward the stem, whereby a single workman may press down upon the turntable with the unit upon it so as to bring the turntable and its supported bit or other unit into said coaxial position and upon release of such pressure the spring means will hold the unit against the suspended stem and rotation of the turntable and the unit supported thereby will start coupling the unit to the stem, in which the turntable comprises a conical bit-supporting member, a perforated base member, a vertical wall joining the members to form a grease chamber, and a horizontal member engages the spring means on its bottom surface and rotatably carries the base of the turntable on its upper surface, a telescoping stand, which includes the horizontal member, surrounds the spring means, and the stand is supported against tilting by a plurality of laterally extending legs.

2. A drill bit lifter-stabber for use on a rotary table to start the threading of a bit to a coaxial vertically hanging drill stem, comprising a tubular stand of two telescoping sections each having a spring engaging seat at one end, spring means engaging the two seats to extend the stand, a perforated turntable base pivotally mounted on the stand coaxially thereof, an upstanding circular wall rising from said base, a conical member joining the base and the wall to form a grease chamber coaxial with the turntable and discharging thru the perforation to the top of the tubular stand to lubricate the bottom of the turntable base.

3. The device of claim 2 in which the pivotal mounting of the base on the stand includes members carried in part by the base and in part by the stand and consists of an annular groove in one of said members, an annular ring on the other member fitting the groove, a stud coaxial with the ring, and retaining means on the stud to prevent axial movement of the turntable with respect to the stand.

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