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2,318,428

WOBBLER OR FLEXIBLE MOUNTING FOR STUFFING BOXES

Filed Oct. 28, 1940

2 Sheets-Sheet 1

FIG. 1.

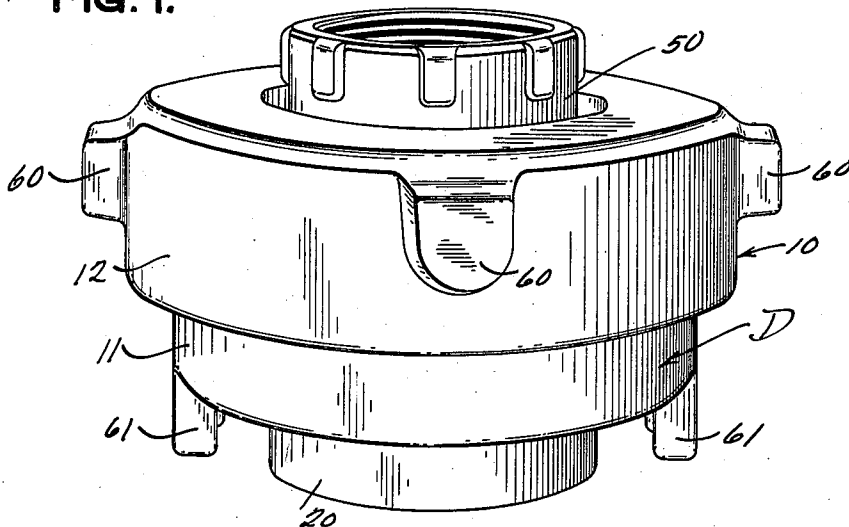
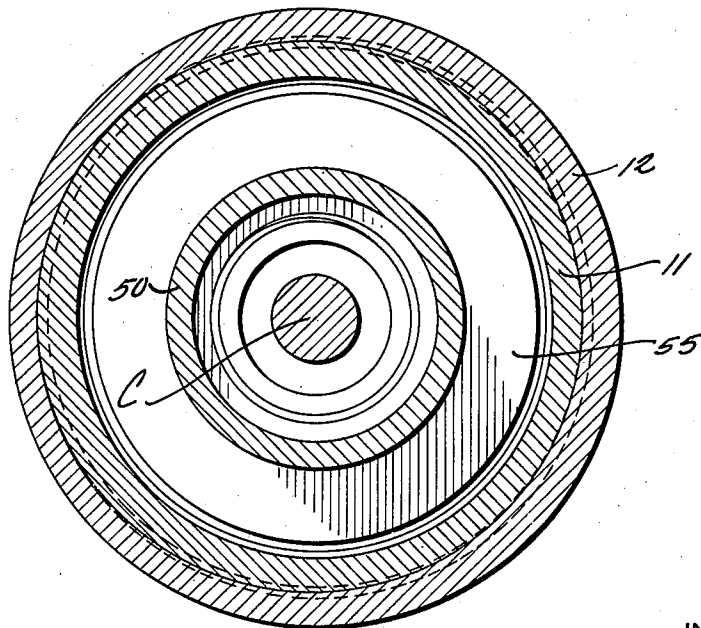


FIG. 3.



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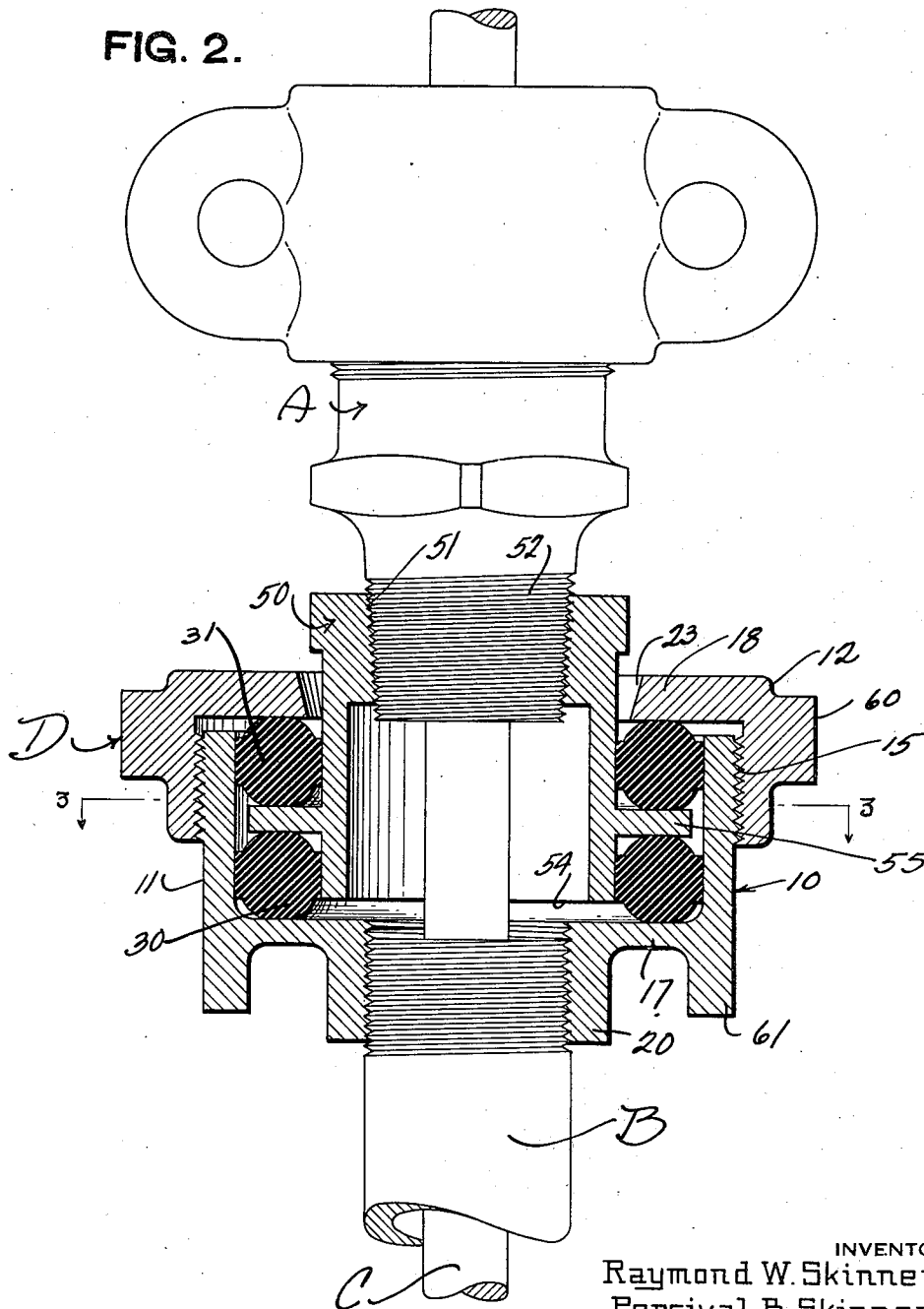
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2 Sheets-Sheet 2

FIG. 2.



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WOBBLER OR FLEXIBLE MOUNTING FOR
STUFFING BOXESRaymond W. Skinner and Percival B. Skinner,
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Application October 28, 1940, Serial No. 363,228

2 Claims. (Cl. 285—90)

This invention relates to improvements in oil well pumping equipment.

The primary object of this invention is the provision of an improved stuffing box for oil wells having a wobbler associated therewith so as to permit the pump or polish rod to rock in its slight axial movement, as is the case with conventional pumping jacks, without impairing the efficiency of the equipment, and particularly the packing of the stuffing box.

A further object of this invention is the provision of an improved wobbler for oil well pumping equipment adapted to fit between the oil well casing and conventional pump jack stuffing box, which is of a very compact nature so as not to impair the operating efficiency of any of the conventional parts of pumping equipment, and which is of a construction to withstand high pumping pressures.

Other objects and advantages of this invention will be apparent during the course of the following detailed description.

In the accompanying drawings, forming a part of this specification, and wherein similar reference characters designate corresponding parts throughout the several views,

Figure 1 is a perspective view of the improved wobbler.

Figure 2 is a side elevation of a conventional pumping jack stuffing box showing in cross section the improved wobbler associated therewith upon the well casing.

Figure 3 is a cross sectional view taken thru the improved wobbler substantially on the line 3—3 of Figure 2.

In the drawings, wherein for the purpose of illustration is shown only a preferred embodiment of the invention, the letter A may generally designate a conventional stuffing box such as is used for the polish or pump rods of a conventional pumping jack. The oil well casing B receives the pump or polish rod C therein, and between the casing and the stuffing box is adapted to be positioned the improved wobbler D.

It is well known to those skilled in this art that polish and pumping rods of oil well pumping equipment adjacent to the stuffing box will not move in a true axial line. This is caused by the motion of the walking beam. To compensate for this eccentricity and to avoid the many complications resulting therefrom, we have provided a wobbling block which will not interfere with application upon conventional equipment, due to the fact that it is so very compact. Furthermore, the device is of a nature which

is wear resistant and will withstand high pumping pressures.

In the preferred form of the invention the wobbler includes a casing construction 10 consisting of a well casing attaching portion 11 and a complementary portion 12. The casing portions 11 and 12 have annular walls; the annular wall of the portion 11 having external screw threads 15 to receive the internal screw threads of the annular wall of the portion 12. Furthermore, these portions 11 and 12 have end walls 17 and 18 respectively. End wall 17 is provided with an internally screw threaded collar 20 adapted to receive the upper screw threaded end of the well casing B therein. An inwardly convergent opening 23 is provided in the wall 18. This construction of the casing 10 provides a ring-shaped device and defines a chamber in the casing, adapted to receive packing rings 30 and 31 resting respectively against the inside surfaces of the walls 17 and 18. They may be formed of solid rubber or "neoprene."

The wobbler furthermore includes a sleeve portion 50, which in the form shown in the drawings, is separate from the casing of the stuffing box. However, we want it to be understood that this sleeve portion may be an integral part of the stuffing box casing. In the form shown, the sleeve 50 is provided with internal screw threads 51 to detachably receive the screw threads 52 upon the casing of the stuffing box A. The sleeve is of a size to fit freely thru the opening 23 of the casing portion 12 and it depends into the casing chamber so that the end edge 54 may terminate short of the inside surface of the wall 17. It is externally provided with an annular flange 55, the outer periphery of which terminates short of the inner peripheral surface of the casing 10, as shown in Figure 2. The flange 55 is spaced about midway between the inside surfaces of the end walls 17 and 18 and overlaps appreciably said end walls, so that it would be impossible to withdraw the sleeve 50 from the casing 10. The packing rings 30 and 31 rest in compression between the end wall 17 and flange 55, and wall 18 and flange 55 respectively, and said compression rings engage in fluidtight relation against the exterior of the sleeve 50 and the interior of the annular wall of the casing portion 11.

The rings 30 and 31 are circular in cross section, except for annular stub portions on the inner and external circumference thereof, which engage respectively against the exterior surface

of the sleeve 50 and the interior surface of the annular wall of casing 11.

The operation of the improved wobbler will be apparent to any one skilled in the art, from the foregoing description. It is to be understood that instead of the well casing B, a conventional pumping T base may be attached to the lower portion of the wobbler casing.

The casing portions 11 and 12 are provided with wrench engaging lugs 60 and 61 respectively thereon.

Various changes in the shape, size and arrangement of parts may be made to the form of invention herein shown and described, without departing from the spirit of the invention or the scope of the claims.

We claim:

1. In a wobbler for well pumping jacks and the like, the combination of a metallic casing comprising a pair of relatively detachable parts, each of said parts including an annular wall and an end wall, said annular walls of the parts being detachably screw threaded together to relatively space the end walls of said parts to define a chamber therebetween, one of said parts having a screw threaded opening therein to detachably receive an end of a well casing, and the other of said parts having an opening therein, a metallic sleeve loosely extending into said last opening and within the chamber being provided with an external annular flange normally overlapping the end walls of said casing, said sleeve having a portion extending externally of said casing and being provided with means for detachably connecting a pump jack stuffing box thereto, and individual flexible packing members within the chamber of said casing having normally convex surfaces engaging in sealing contact with the

opposite sides of said flange and the inner surfaces of the end walls of said casing whereby to facilitate tilting of the sleeve within said casing.

2. In a wobbler for well pumping jacks and the like, the combination of a metallic casing comprising a pair of relatively detachable parts, each including an annular wall and an end wall, said annular walls being detachably screw threaded together to relatively space the end walls of the parts to define a chamber therebetween, the lowermost of said end walls having a screw threaded opening therein for detachable connection of a well casing thereto, the other of the parts having an opening therein larger than the opening in the lower end wall, a metallic sleeve loosely extended into the opening of the upper end wall and being of a diameter greater than the opening in the lower wall and at its lower end terminating short of the inner surface of said lower wall, said metallic sleeve being provided with an external annular flange overlapping beyond the openings in the end wall and terminating short in closely spaced relation at its outer periphery with respect to the inner surface of said chamber, said sleeve projecting externally of said chamber and having means on the top thereof for detachable connection of a pump jack stuffing box thereto, and flexible packing means in the chamber of the casing engaging said flange at both sides thereof and the inner surfaces of said end walls and the facing surfaces of said sleeve and chamber and holding said metallic sleeve in supported relation by said casing.

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