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W. BRAUER

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OIL AND GAS CONTROLLER

Filed April 10, 1926

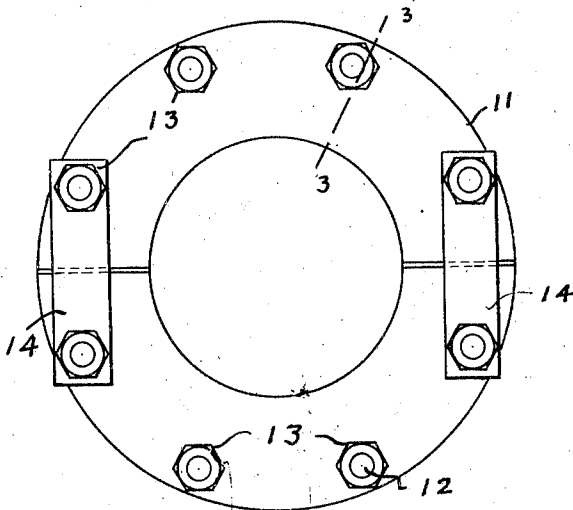


Fig. 2.

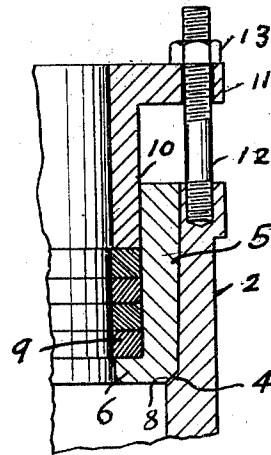


Fig. 3.

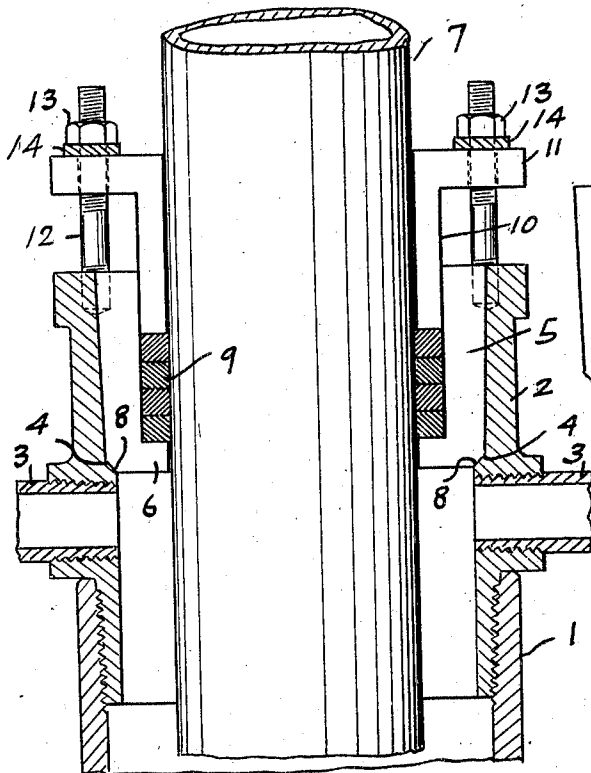


Fig. 1.

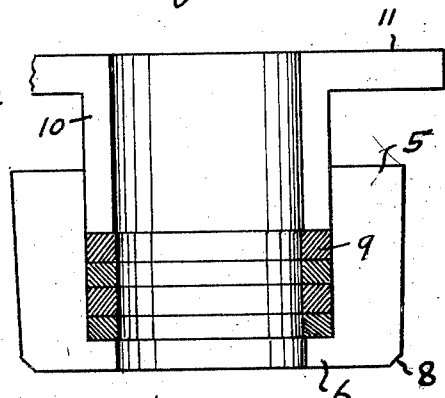


Fig. 4.

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UNITED STATES PATENT OFFICE.

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OIL AND GAS CONTROLLER.

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This invention relates to new and useful improvements in an oil and gas controller.

One object of the invention is to provide an improved type of oil and gas controller or blow out preventer adapted to be attached to the upper end of well casing and having interchangeable parts whereby it may be adapted to drill stem or tubing of different sizes in a well, and which is provided for the purpose of controlling the flow of gas from the well.

Another object of the invention is to provide an apparatus of the character described, which is of such construction that special packing is not required, in the combination, but in which conventional packing may be used.

A further feature of the invention is to provide a device of the character described, which is of very simple construction, and may be cheaply produced and is very efficient in use.

With the above and other objects in view this invention has particular relation to certain novel features of construction, operation and arrangement of parts, an example of which is given in this specification and illustrated in the accompanying drawings, wherein:—

Figure 1 shows a vertical sectional view of the device, as applied in use.

Figure 2 shows a plan view of the gland employed.

Figure 3 shows a fragmentary vertical sectional view, taken on the line 3—3 of Figure 2, and

Figure 4 shows a fragmentary cross sectional view, showing a larger type of stuffing box and gland than shown in Figure 1.

Referring now more particularly to the drawings, wherein like numerals of reference designate similar parts in each of the figures, the numeral 1 designates a well casing to the upper end of which the tubular head 2 is attached.

The lower end of this head is reduced and threaded into the upper end of the casing and has the opposite gas outlets into which are connected the gas lines 3, 3. Above the gas outlets the inside diameter of the head is enlarged, forming an annular, downwardly tapering shoulder 4, which is ground smooth and above this shoulder the inside wall of the head has a slight upward flare.

There is a stuffing box within the flared

portion of the head which includes a retainer having the two semi-circular sections, as 5, 5, whose lower ends have the inwardly turned flanges 6, 6, which fit closely around the drill stem, or other tubing 7, and the outer surfaces of said sections are upwardly flared to conform to and closely fit within the upper end of the head. The lower ends of the sections 5 have the beveled, or tapering faces 8, which are ground smooth and fit against the seat 4 to form a tight joint. Within the sections 5 and around the tubing 1 is the packing 9 which rests on the flange 6, and a sectional gland 10 is fitted within the sections 5 and against the upper end of said packing. This gland has an annular outwardly extending flange 11 and stud bolts 12 have their lower ends threaded into the upper end of the head 2 and their upper ends extend through openings in the flange 11 and have the retaining nuts 13 threaded thereon. The sections of the gland are connected together by means of the oppositely disposed links 14, 14, having end holes through which the adjacent stud bolts 12 extend, said links serving as ties to secure the sections of the gland 10 together.

It often happens that the tubing 7 will vary in diameter and for that reason different sizes of the retainer sections 5 and the gland 10 may be employed, so as to closely fit around the tubing 7 in use, and these different sizes are interchangeable and may be used with the same head 2 and the same type of packing 9, and so a single head may be used on the casing of a well and utilized irrespective of the diameter of the drill stem or tubing employed.

What I claim is:—

A device of the character described including a tubular head whose lower end is reduced and threaded, an inside annular downwardly converging shoulder in the head forming a seat, the inside wall of the head above said seat being upwardly flared, a retainer formed of sections, inwardly turned flanges carried by the lower ends of said sections, the outer surface of said sections being upwardly flared to conform to and closely fit within the upper end of the head and the lower ends of said sections having tapering faces forming seats adapted to fit against the seat in said head, an annular packing in said retainer and resting on said flanges, a sectional gland fitted within the upper end of

the retainer against the packing, the upper end of the gland having an outwardly extending flange, stud bolts anchored to the upper end of the head and extending upwardly through said flange of said gland, oppositely disposed links through which the upper ends of the adjacent bolts work, said

links connecting the sections of said gland together and nuts screwed onto the ends of said bolts, to hold said links in position and to secure the gland against the packing. 10

In testimony whereof I have signed my name to this specification.

WALTER BRAUER.