

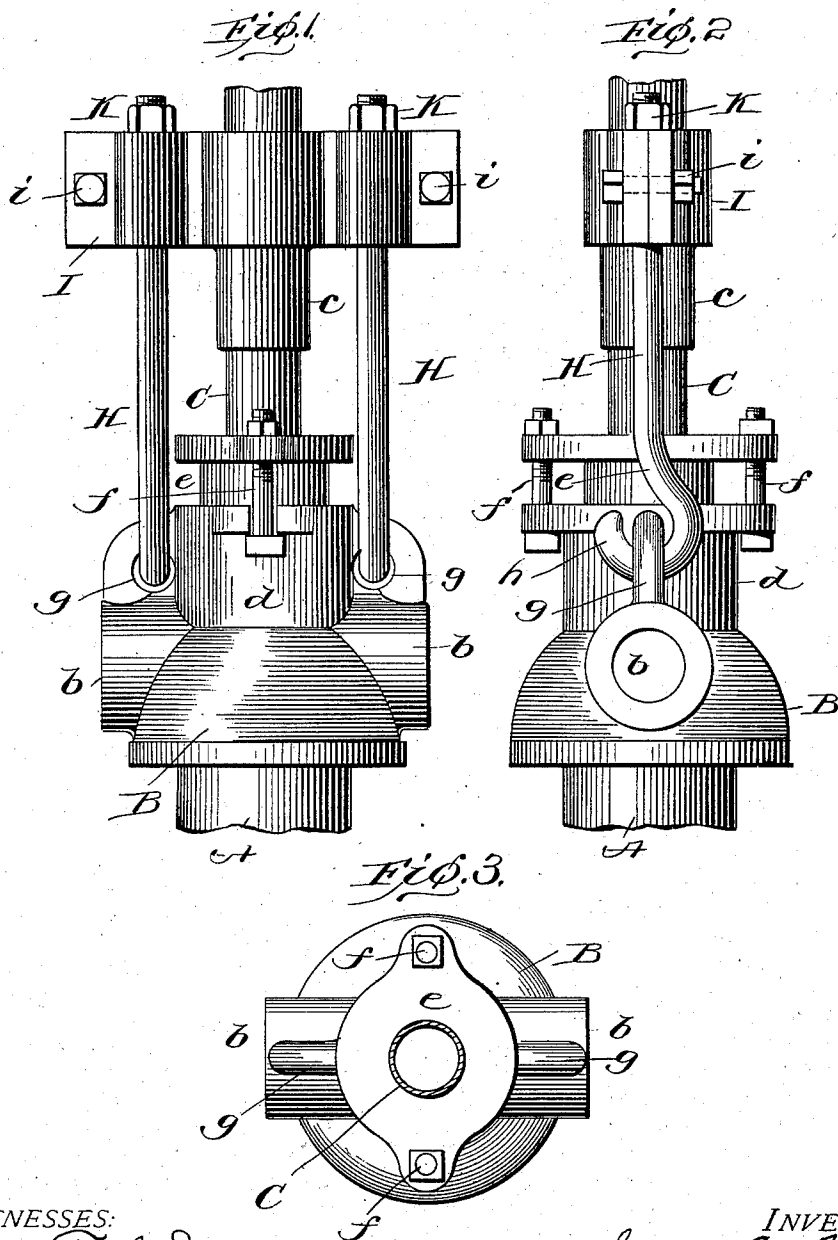
No. 750,428.

PATENTED JAN. 26, 1904.

J. C. BOYCE.
CASING HEAD AND TUBING ANCHOR.

APPLICATION FILED FEB. 17, 1903.

NO MODEL.



WITNESSES:

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BY

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CASING-HEAD AND TUBING-ANCHOR.

SPECIFICATION forming part of Letters Patent No. 750,428, dated January 26, 1904.

Application filed February 17, 1903. Serial No. 143,829. (No model.)

To all whom it may concern:

Be it known that I, JAMES C. BOYCE, a citizen of the United States, residing at Pittsburg, in the county of Allegheny, State of Pennsylvania, have invented certain new and useful Improvements in Casing-Heads and Tubing-Anchors; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a view in elevation of a casing-head and tubing-anchor rods embodying my invention, together with a portion of the tubing and casing with which the same are connected. Fig. 2 is a view of the same, taken at right angles to Fig. 1. Fig. 3 is a top or plan view of the casing-head, the tubing being in section and the anchor-rods and clamp removed.

Like symbols refer to like parts wherever they occur.

My invention relates to that class of devices employed in operating oil-wells for the purpose of maintaining the fixed relation between the casing-head and tubing and counteracting the tendency of the pumping mechanism and pressure within the casing to disturb said operative relation of the tubing and casing-head. Heretofore, so far as I am aware, this class of devices or tubing-anchors have, where combined directly with the casing-head, been of a character which did not permit of their ready removal without disconnecting the gas-pipes from the casing-head, a highly objectionable matter and not permissible under ordinary conditions where the tubing is to be drawn or simply adjusted with relation to the casing-head. To avoid such objections, the anchors should be readily removable from the casing-head without displacement of any of the working connections of the casing-head, and to effect this I combine the casing-head and anchor-rods by means of cast-off connections between the anchor-rods and casing-head, said connections being preferably of a hook-and-eye character, and such a construction embodies my invention.

I will now proceed to describe my invention

more fully, so that others skilled in the art to which it appertains may apply the same.

In the drawings, A indicates the upper end of a string of casing; B, the casing-head attached thereto; C, a section of tubing passing through the casing-head and into the casing, and *c* a tubing-coupling.

The casing-head B will have the usual threaded nipples *b* for the reception of the ends of the gas-pipe which lead from the casing-head and may be provided with a stuffing-box *d*, having a gland *e*, secured by the usual bolts *f*, or any equivalent means for packing the tubing C where it enters the casing-head *b* may be employed.

In line with and above the nipples *b* are formed, preferably integral with the casing-head, perforated lugs or eyes *g* for the reception of the lower hooked ends of anchor-rods H.

H indicate anchor-rods having at their lower ends the hooks *h* and threaded at their opposite ends, which pass through a clamp I, for the reception of nuts K, whereby the anchor-rods are strained between the casing-head and said clamp I.

I indicates a tubing-clamp, which may be comprised of the separable sections having a central tube-passage and lateral passages for the anchor-rods H, said sections after application to the tubing being secured to each other and to the tubing C by bolts and nuts *i* or in other suitable manner.

The several elements of the device having the characteristics pointed out are combined by first applying the sections of clamp I to the tubing C above the coupling *c* (which forms a seat therefor in case the clamp is not made to grip the tubing) and connecting the same by the bolts and nuts *i*, next passing the hooks *h* on the lower end of the anchor-rods H through the perforated lugs or eyes *g* of the casing-head and the upper threaded ends of the anchor-rods through the lateral passages of the clamp I, and finally applying the nuts K to the upper ends of the anchor-rods above the clamp and screwing them home against the clamp I until the anchor-rods are strained between the head and the clamp,

whereby the tubing will be held in a fixed relation to the casing-head notwithstanding the tendency to displacement incident to the operation of the pumping mechanism and the pressure within the casing.

5 Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

10 1. The combination of a casing-head and anchor-rods having cast-off connections, a tubing-clamp, and means for straining the anchor-rods between the tubing-clamp and casing-head, substantially as and for the purposes specified.

15 2. The combination of a casing-head and anchor-rods said head and rods having cast-off connections comprising hook-and-eye devices, a tubing-clamp, and means for connecting the anchor-rods to the tubing-clamp, substantially as and for the purposes specified.

20 3. The combination of a casing-head and anchor-rods, said head and rods having cast-off connections comprising perforated lugs or eyes on the casing-head and hooks on the extremities of the anchor-rods, a tubing-clamp, and means for adjustably connecting the anchor-rods with the tubing-clamp, substantially as and for the purposes specified.

4. The combination of a casing-head having a stuffing-box for the passage of the tubing, anchor-rods threaded at one end and provided with nuts for straining said anchor-rods, cast-off connections between the casing-head and anchor-rods comprising perforated lugs or eyes on the head and hooks on the rods, and a tube-clamp between which and the casing-head the anchor-rods are strained, substantially as and for the purposes specified.

5. The combination of a casing-head having nipples for the reception of the ends of the gas-pipes, anchor-rods, cast-off connections between the casing-head and the anchor-rods comprising perforated lugs on the casing-head above and in line with the nipples thereof and hooks on the anchor-rods, a separable tube-clamp having passages for the anchor-rods, and means for straining the anchor-rods between the tube-clamp and casing-head, substantially as and for the purposes specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 13th day of February, 1903.

JAMES C. BOYCE.

Witnesses:

C. H. GOODWIN,
LOUIS C. SANDS, Jr.