

F. J. MOSER.
CASING HEAD.
APPLICATION FILED FEB. 8, 1912.

1,045,314.

Patented Nov. 26, 1912.

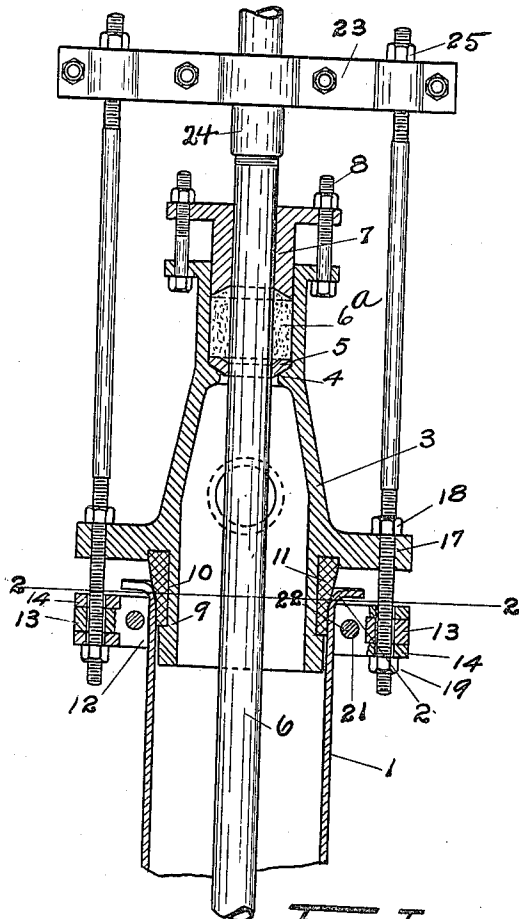


Fig 1

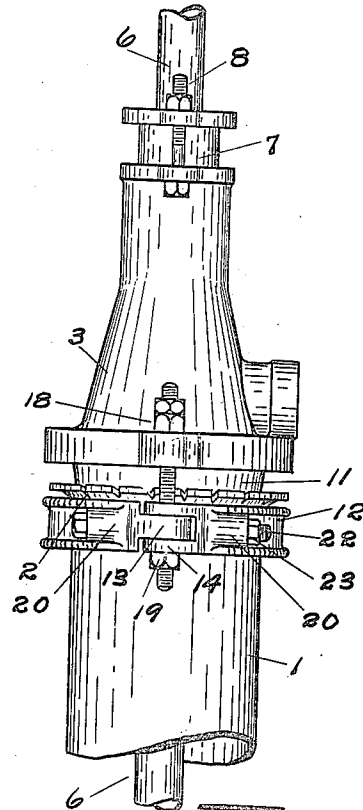


Fig 3

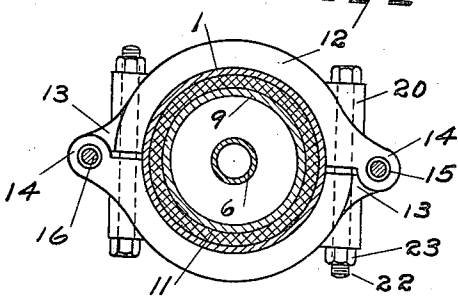


Fig 2

Witnesses

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CASING-HEAD.

1,045,314.

Specification of Letters Patent.

Patented Nov. 26, 1912.

Application filed February 8, 1912. Serial No. 676,255.

To all whom it may concern:

Be it known that I, FRED J. MOSER, a citizen of the United States, residing at Kane, in the county of McKean and State of Pennsylvania, have invented new and useful Improvements in Casing-Heads, of which the following is a specification.

This invention relates to casing heads and consists in certain improvements in the construction thereof as will be hereinafter fully described and pointed out in the claims.

More particularly the invention relates to casing heads designed to be used with gas wells. In the drilling of gas wells it is common to use a length of pipe, ordinarily known as the drilling nipple, which is belled out at the top. It is also common practice to remove this drilling nipple after the completion of the well putting on a new piece of casing at the head to which the casing head can be connected. This required the provision in advance of this extra piece of casing and in as much as there is usually no assurance of gas this extra provision has been often unnecessary.

One of the objects of the invention is to provide means whereby the ordinary drilling nipple may be used for the top section of the casing.

The invention also contemplates improvements in the clamp which is secured to the belled nipple. Other features of the invention will appear from the specification and claims.

The invention is illustrated in the accompanying drawings as follows:—Figure 1 shows a central section through the casing head and adjacent parts. Fig. 2 a section on the line 2—2 in Fig. 1. Fig. 3 shows an alternative construction or a construction in which only a part of the invention is used.

1 marks the drilling nipple, 2 the belled end of the nipple, and 3 the casing head.

The casing head is provided with the shoulder 4 on which a washer 5 rests. The tubing 6 extends through the washer 5. Packing material 6^a is arranged above the washer 5 and the follower 7 is arranged on the packing material. Pressure is put on the follower by means of the bolts 8. The stuffing box thus formed is of ordinary construction.

An annular flange 9 extends downwardly from the bottom of the casing head and this extends into the casing or drill nipple 1. It

is provided with the annular groove 10 immediately under the casing head and the wedged shaped gasket 11, ordinarily of rubber, is arranged in this annular groove extending beyond the surface of the flange 9. By crowding the casing head down on to the belled nipple, a joint is made between the wedging surface of the gasket 11 and the walls of the drilling nipple toward the inner edge of the belled end. In this way a tight joint can be formed with the ordinary drilling nipple.

A clamp is made up of the clamp pieces 12. There are two of these of similar construction, each having an ear 13 which extends through the crotch or double eared end 14 of the companion member. These ears have the perforations 15 extending through them and the vertical clamping bolts 16 extends through these perforations, the perforations 15 being preferably large enough to allow play at the joints. The clamping bolt 16 extends through the perforation 17 in the casing head 3 and nuts 18 and 19 are arranged above the casing head and below the clamp respectively for putting pressure on the casing head.

The clamp members 12 have the lugs 20 extending transversely therefrom and these have the perforations 21 extending through them. Bolts 22 are arranged in these perforations, the nuts 23 on the bolts forming means by which the two members 12 may be clamped on the casing 1, the play afforded by making the perforation 15 larger than the bolt 16 permitting the clamping movement of the parts 12. The clamp formed by the parts 12 also forms a backing for the belled end 2 so that it will readily sustain the pressure against it.

It will be understood that in these gas wells there is often very high pressure and in order to hold the tubing in place in the well a clamp 23 is arranged on the tube above the coupling 24. Bolts 16 extend upwardly through the clamp 23 and nuts 25 are arranged on the upper ends of the bolts 16, thus securing the clamp 23.

In order to give to the clamp as great strength as possible it is desired to bring the bolts 16 as close to the casing as the construction will permit. In order to do this and provide for the thickness of the clamp, it is necessary to provide the lugs 20 in order to form the seats for the heads of the

bolts 22 and the nuts 23. In this way, the bolts 22 can be brought very close to the casing and in this way the upright bolts 16 can be arranged very close to the casing thus relieving the strain on the clamp 12 and also on the clamp 23.

In Fig. 3 the same structure is shown as in Figs. 1 and 2 except that the bolts 16 do not extend upwardly to provide means for holding the clamp 23.

What I claim as new is:—

1. The combination of a casing; a clamp made up of two parts hinged together and arranged on the casing; hinge pins forming pintles for the hinges and extending vertically forming securing bolts in connection with the clamps; and clamping bolts extending transversely through the parts for clamping the clamp parts on the casing.
2. In a clamp, the combination of clamp sides adapted to engage a casing; perforated lugs extending from the clamp sides; clamping bolts extending through said lugs adjacent to the inner periphery of the clamp; upright bolts secured to the clamp sides outside of the transverse clamping bolts; and means for connecting the upright bolts with a well part.
3. The combination of a casing; a casing head; a clamp made up of two parts hinged together; clamping bolts extending transversely for exerting pressure on the casing; and means connecting the clamp and casing head.
4. The combination of a casing; a casing head; a clamp, said clamp having hinged joints; bolts forming hinged pins and forming means for connection between the clamp and the casing head; and transverse bolts for exerting pressure to secure the clamp on the casing.
5. The combination of a casing; a casing head on the casing; a tube extending through the casing head; a hinged clamp on the casing; bolts forming hinged pins for

the hinged clamp; and means for connecting said bolts with the tube and the casing head.

6. The combination of a casing; a casing head on the casing; tubing extending through the casing head; a clamp on the casing; and a connection between the clamp, casing head and tubing.

7. The combination of a belled casing end; a casing head; a gasket between the belled end and casing head; a clamp on the casing forming a backing for the belled end; a tubing extending through the casing head; and a connection between the tubing and clamp.

8. The combination of a belled casing end; a casing head; a gasket between the belled end and casing head; a clamp on the casing forming a backing for the belled end; a tubing extending through the casing head; and a connection between the clamp and casing head.

9. The combination of a belled casing end; a casing head; a gasket between the belled end and casing head; a clamp on the casing forming a backing for the belled end; a tubing extending through the casing head; and a connection between the clamp, casing head and tubing.

10. In a clamp, the combination of clamp sides adapted to engage a casing; perforated lugs extending from the clamp sides; clamping bolts extending through said lugs adjacent to the inner periphery of the clamp; upright bolts secured to the clamp sides outside of the transverse clamping bolts; and means for connecting the upright bolts with a tubing.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

FRED JOSEPH MOSER.

Witnesses:

W. W. HETRICK,
E. W. AGGERS.