

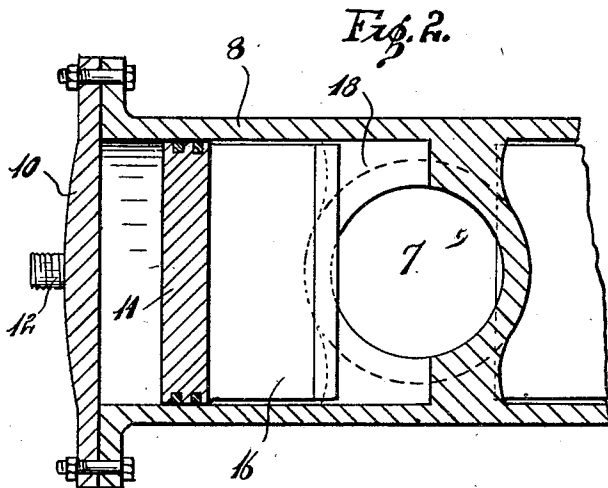
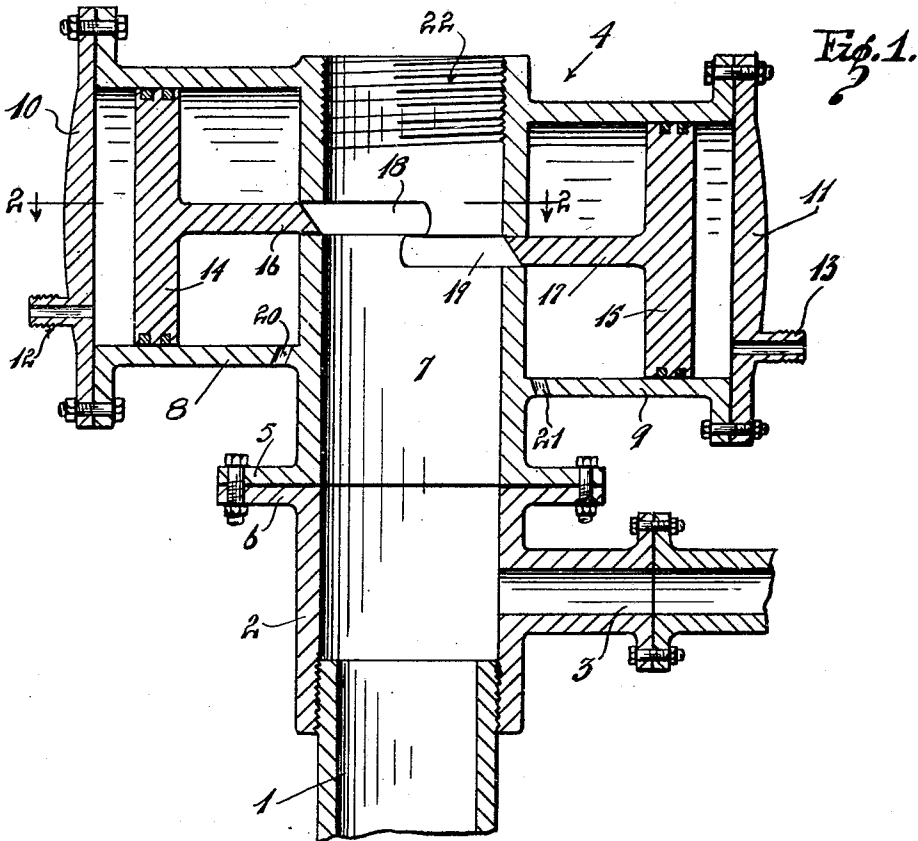
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HYDRAULIC CASING CONTROL HEAD

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HYDRAULIC CASING CONTROL HEAD

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This invention relates to a hydraulic casing control head which is mounted adjacent the top of the casing in an oil well for the purpose of closing said casing in the event of an accidental blow-out of the well.

An object of my invention is to provide a casing control head which is provided with hydraulically actuated blades whereby the tubing, or the like, in the casing can be sheared off and the casing completely closed.

Still another object is to provide a control head of the character stated which is adapted to be actuated from a control at a considerable distance from the well.

Still another object is to provide a control head of the character stated which is simple in construction and relatively inexpensive to manufacture.

Other objects, advantages, and features of invention may appear from the accompanying drawing, the subjoined detailed description, and the appended claim.

In the drawing

Figure 1 is a longitudinal sectional view of my control head.

Figure 2 is a fragmentary sectional view taken on line 2, 2 of Figure 1.

Referring more particularly to the drawing, the numeral 1 indicates the casing of the oil well which may be of any suitable diameter. A sub 2 screws onto the top of the casing and this sub is provided with an outlet nipple 3 through which the flow of the well is diverted when the head is closed. The control head 4 is flanged, as at 5, at the bottom thereof, which flange fits upon a flange 6 on the top of the sub 2. The two flanges are bolted together in the usual and well-known manner. The central passage 7 of the head 4 is substantially the same diameter as the outside of the casing 1.

A pair of oppositely disposed hydraulic cylinders 8, 9 are formed on the head 4, the outer ends of said cylinders being closed by heads 10, 11, respectively, which are bolted

or otherwise secured to the cylinders. An inlet fitting 12, 13 is provided on the heads 10, 11, respectively, and the hydraulic hose, pipe, or the like, is secured to the fitting for the purpose of supplying the cylinders with the fluid under pressure.

A piston 14, 15 is provided in the hydraulic cylinders 8, 9, respectively, and these pistons are provided with horizontally extending cutting blades and gates 16, 17, respectively. The blades 16, 17 may be integrally formed with the pistons 14, 15 or they may be detachably secured thereto. These blades are adapted to slide in groove-ways 18, 19, respectively, so that they will be accurately guided in their horizontal movement.

When it is desired to close off the casing, fluid under pressure is introduced into the hydraulic cylinders 8, 9, the pistons 14, 15 are then moved inwardly, and the blades 16, 17 also moved inwardly across the central passage 7, thus completely closing said passage. Even though drill pipe or the like may be in the hole the blades 16, 17 are sharpened and are sufficiently strong so that the pipe will be cut off and the opening thus completely closed. It will be obvious that the head may be actuated at a considerable distance from the well and without danger to the workman.

Vent ports 20, 21 are provided in the cylinders 8, 9, respectively, for the purpose of relieving pressure back of the pistons 14, 15. The upper end of the head 4 is threaded, as at 22, so that a well flowing apparatus can be mounted thereon, as is usual in oil wells.

Having described my invention, I claim:

A hydraulic casing control head adapted to be mounted on the casing of an oil well and comprising a body having a central passage therethrough, means securing said body to the casing, a pair of oppositely disposed hydraulic cylinders on said body, a piston in each of said cylinders, a blade extending from each of said pistons, said blades being

adapted to extend across said central passage
whereby the head is closed, the outer ends of
said blades tapering to a sharp edge whereby
the adjacent edges of the blades are sharp,
5 and a fluid intake fitting in each of said
heads, and said body having a pair of super-
posed groove-ways formed therein in which
said blades slide.

In testimony whereof, I affix my signature.

JOSEPH S. LACEY.

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