

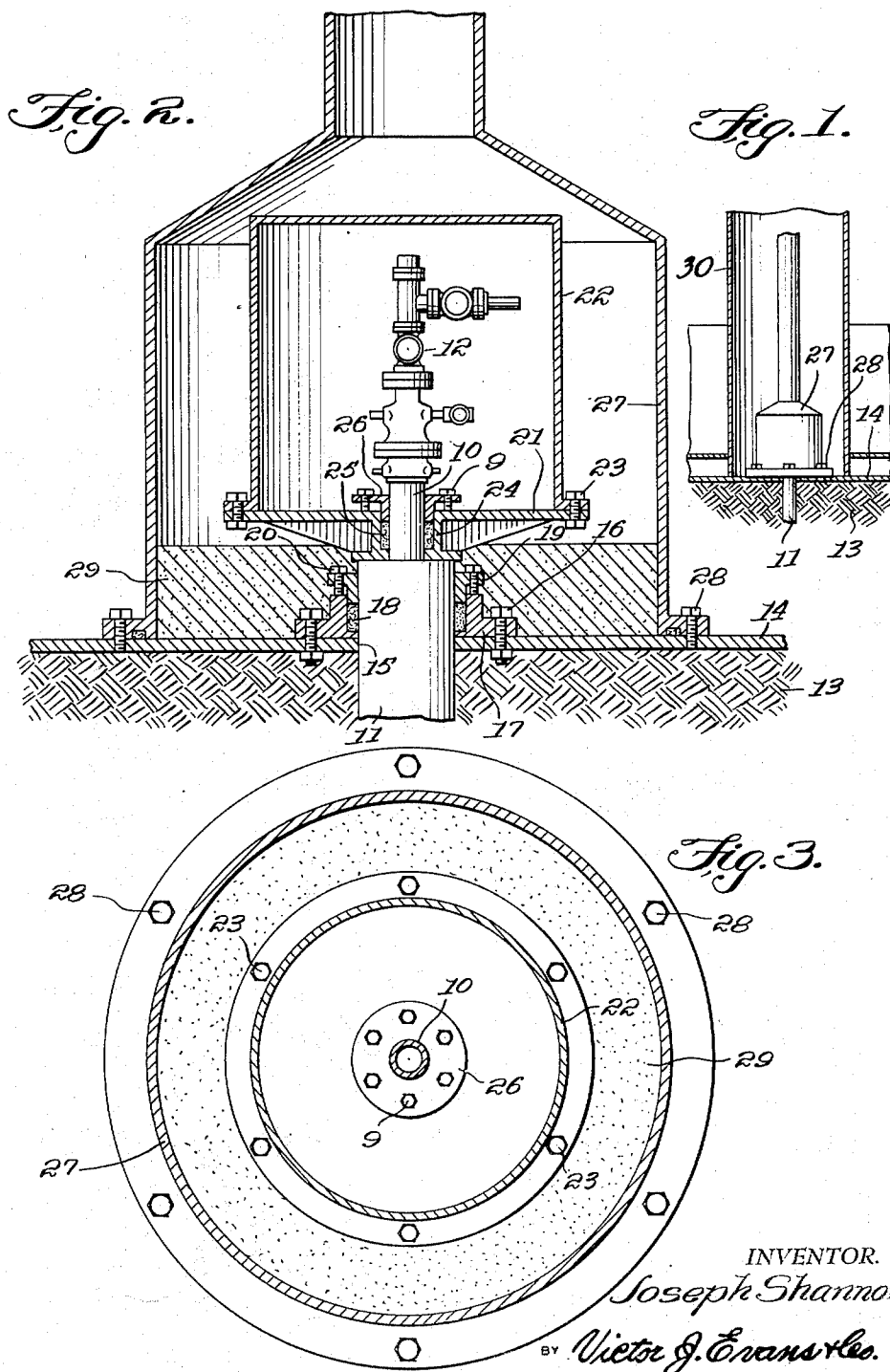
Dec. 5, 1950

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2,532,341

CAP FOR MARINE OIL WELLS

Original Filed March 20, 1947



UNITED STATES PATENT OFFICE

2,532,341

CAP FOR MARINE OIL WELLS

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Original application March 20, 1947; Serial No. 735,832. Divided and this application February 8, 1949, Serial No. 75,187

3 Claims. (Cl. 166-14)

1

This invention relates to oil well-drilling equipment for use under water, and more particularly to a cap or head assembly for the upper end of an oil pipe.

This application is a division of my co-pending application, Serial No. 735,832, filed March 20, 1947.

The object of the invention is to provide an assembly for enclosing and protecting the upper end of an oil pipe.

Another object of the invention is to provide a head assembly for protecting an oil pipe and which is extremely simple and inexpensive to produce and install.

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

In the accompanying drawings forming a part of this application, and in which like numerals are employed to designate like parts throughout the same:

Figure 1 is an elevational view, with parts in section showing the head assembly in position about the upper end of the oil pipe;

Figure 2 is an enlarged vertical sectional view of the completed oil well head, with the various packings, the cement base, the top cover, and the cement form used in forming the head;

Figure 3 is a horizontal cross-sectional view of the oil well head.

The present invention is directed to a head assembly for use in enclosing and protecting the oil well pipe 10. The oil well pipe is arranged in its operative position by using the procedure and apparatus described in detail in my copending application. Thus, as the well is being worked, the pipe casing 11 is extended down into the well. The oil pipe 10 through which the oil is brought to the surface lies internally of the casing 11 and the pipe 10 projects upwardly therethrough. Suitable outlet fittings 12 are connected to the top of the pipe 10 whereby the flow of oil therefrom can be controlled as desired.

Supported by the land surface or undersea bottom 13 is a horizontally-disposed bottom piece 14 which is provided with a central opening 15 through which projects the casing 11.

Supported on the bottom piece 14 and secured thereto by securing elements, such as bolt-and-nut assemblies 16 is a packing gland 17. Suitable packing 18 is interposed between the packing gland 17 and the casing 11 and a pressure plate 19 provided with positioning bolts 20 retains the packing 18 in its proper place. Supported on the top of the casing 11 is a base 21 and a cover 22 is supported by the base 21 whereby sea water will be prevented from contacting the fittings 12.

2

The cover 22 is secured to the base 21 by means of bolt-and-nut assemblies 23. The base 21 is cut away to define a socket 24 for receiving suitable packing 25 and the packing 25 is retained in the socket 24 by means of a pressure plate 26 which carries adjusting bolts 9.

Next, an open-topped concrete form 27 is arranged in spaced relation about the cover 22 and the concrete form 27 is secured to the bottom piece 14 by suitable threaded bolts 28. Concrete 29 is poured through the upper open end of the cement forms and allowed to set about the parts surrounding the casing 11. From the foregoing, it is apparent that an assembly has been provided which is easy to install and especially useful for capping and protecting oil pipes which have been positioned. Thus, in Figure 1, the large pipe 30 which is part of apparatus of my co-pending application is positioned about the concrete form 27 whereby the operator can inspect or work on the head assembly as desired.

As many embodiments may be made of this inventive concept, and as many modifications may be made in the embodiment hereinbefore shown and described, it is to be understood that all matter herein is to be interpreted merely as illustrative and not in a limiting sense.

I claim:

1. In an undersea oil pipe head arrangement, the combination with an outer casing, an oil pipe positioned within said casing and provided with outlet fittings on its upper end, a bottom piece supported by the sea bottom, a base supported on the top of said casing, a cover supported by said base and detachably secured to the latter for enclosing said outlet fitting, and a concrete foundation surrounding said outer casing and supported on said bottom piece.

2. In an undersea oil pipe head arrangement, the combination with an outer casing, an oil pipe positioned within said casing and provided with outlet fittings on its upper end, a bottom piece supported by the sea bottom, a base supported on the top of said casing, a cover supported by said base and detachably secured to the latter for enclosing said outlet fitting, a concrete foundation surrounding said outer casing and supported on said bottom piece, said base being cut away to define a socket, packing positioned in said socket and surrounding said oil pipe, and a pressure plate for maintaining said packing in said socket.

3. In an undersea oil pipe head arrangement, the combination with an outer casing, an oil pipe positioned within said casing and provided with

outlet fittings on its upper end, a bottom piece supported by the sea bottom, a base supported on the top of said casing, a cover supported by said base and detachably secured to the latter for enclosing said outlet fitting, a concrete foundation surrounding said outer casing and supported on said bottom piece, said base being cut away to define a socket, packing positioned in said socket and surrounding said oil pipe, a pressure plate for maintaining said packing in said socket, packing arranged in surrounding relation with respect to said casing, a packing gland secured to said bottom piece, and a pressure plate coacting with said packing gland for maintaining said last-named packing in position.

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