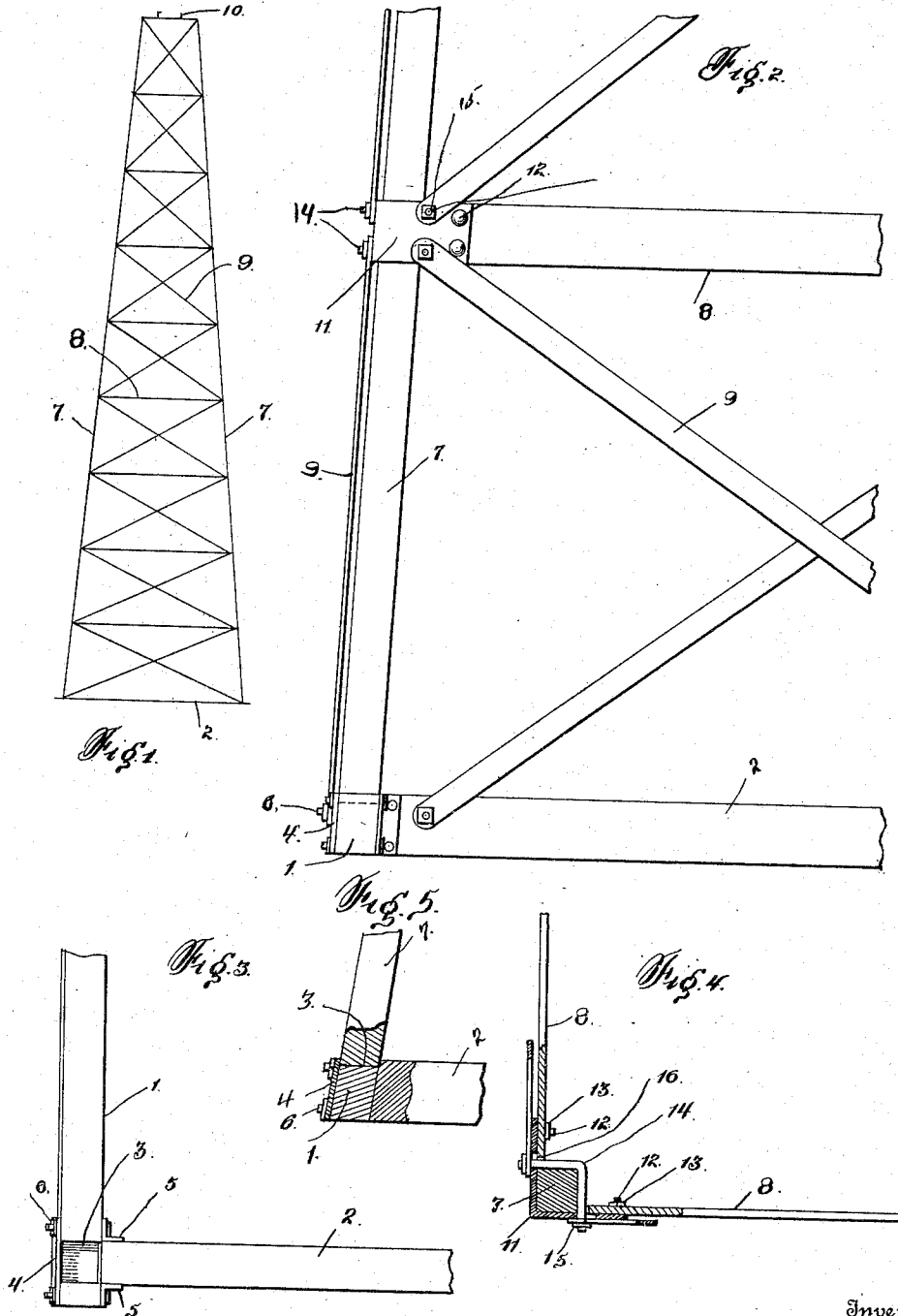


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DERRICK AND MASTS FOR OIL WELL RIGGINGS.  
APPLICATION FILED FEB. 27, 1909.

947,034.

Patented Jan. 18, 1910.



Witnesses  
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# UNITED STATES PATENT OFFICE.

DAVID B. CAMPBELL, OF BUTLER, PENNSYLVANIA.

DERRICK AND MASTS FOR OIL-WELL RIGGINGS.

947,034.

Specification of Letters Patent. Patented Jan. 18, 1910.

Application filed February 27, 1909. Serial No. 480,309.

*To all whom it may concern:*

Be it known that I, DAVID B. CAMPBELL, a citizen of the United States of America, residing at Butler, in the county of Butler and State of Pennsylvania, have invented certain new and useful Improvements in Derricks and Masts for Oil-Well Riggings, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to derricks and masts used in connection with oil well rigging, and the object of the invention is to provide positive and reliable means for connecting the uprights or masts to the foundation sills of a derrick.

Another object of my invention is to provide a simple and durable connection for the girths and braces of a portable derrick, whereby a rigid and safe structure will be provided, capable of maintaining considerable weight, as the tubing or drilling tools of a well rigging.

I attain the above object by a structure that will be presently described in detail and claimed.

In the drawings, Figure 1 is a diagrammatic view of an oil well derrick or mast, Fig. 2 is an enlarged elevation of a portion of the same, Fig. 3 is a plan of a portion of the derrick sills, Fig. 4 is a horizontal sectional view of a portion of the derrick equipped with my connections, and Fig. 5 is an exaggerated vertical sectional view of a portion of the derrick.

Referring to the drawings in detail 1 and 2 designate the sills of the derrick. The sill 1 in close proximity to each end is provided with a socket 3. Each of said sockets 3 is formed by transversely cutting away the sill 1 near each end to provide a recess open at each end, one end of the recess is closed through the medium of a plate 4 secured to the outer side of the sill 1 and the other side of the recess is closed through the medium of one end of the sill 2. The sill 2 is secured to the sill 1 by the angle irons 5. Hold fast devices 6 are employed for securing the plate 4 and angle irons 5 in position.

Fitted in the sockets 3 at the four junctures of the foundation sills are masts 7 and these masts are connected by horizontal girths 8 and diagonally disposed braces 9, the upper ends of the masts being connected by a suitable cap 10. To connect the girths

8 to the masts 7, angle plates 11 are used, these girths being connected to the angle plates by bolts 12 and nuts 13. The angle plates are then secured in position by angle bolts 14 and nuts 15 the ends of said angle-bolts also passing through the ends of the braces 9 and retaining the same in place. The angle plates 11, embrace the outer sides of the masts 7, while the angle-bolts 14 embrace the inner sides of the masts; the girths 8 being cut away, as at 16 to provide clearance for the bolts 14.

I desire to call particular attention to the manner of supporting the lower ends of the masts and to the manner in which two of the sills are positioned to support the lower ends of said masts. The sills containing the sockets 3 are rectangular in cross section, with the upper and lower sides parallel and in a horizontal plane, while the other sides are parallel and in a plane corresponding to the angularity of the mast 7, thereby providing a substantial foundation for said masts.

It will thus be observed that I have devised a novel connection for simultaneously fixing the girths and braces of the masts of a derrick, the connection in its entirety being constructed of strong and durable metal.

Having now described my invention, what I claim as new, is;—

1. In a derrick, a plurality of sills extending at right angles with respect to each other, certain of said sills having transversely extending recesses in proximity to the ends thereof open at each end, plates for closing one end of said recesses, the other end of said recesses being closed by the ends of the other sills, the ends of the last mentioned sills in connection with said plates and said recesses constituting sockets, and angularly disposed masts having the lower ends fitting in said sockets.

2. In a derrick, a plurality of sills extending at right angles with respect to each other, certain of said sills having transversely extending recesses in proximity to the ends thereof open at each end, plates for closing one end of said recesses, the other end of said recesses being closed by the ends of the other sills, the ends of the last mentioned sills in connection with said plates and said recesses constituting sockets, angularly disposed masts having the lower ends fitting in said sockets, said sills having the top and bottom thereof parallel and in a horizontal

plane, and said sills having the sides parallel and in a plane coincident with the angularity of said mast.

3. In a derrick, a plurality of sills extending at right angles with respect to each other, certain of said sills having transversely extending recesses in proximity to the ends thereof open at each end, plates for closing one end of said recesses, the other end of said recesses being closed by the ends of the other sills, the ends of the last mentioned sills in

connection with said plates and said recesses constituting sockets, angularly disposed masts having the lower ends fitting in said sockets, and angle irons connecting the recessed sills to the other sills. 15

In testimony whereof I affix my signature in the presence of two witnesses.

DAVID B. CAMPBELL.

Witnesses:

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