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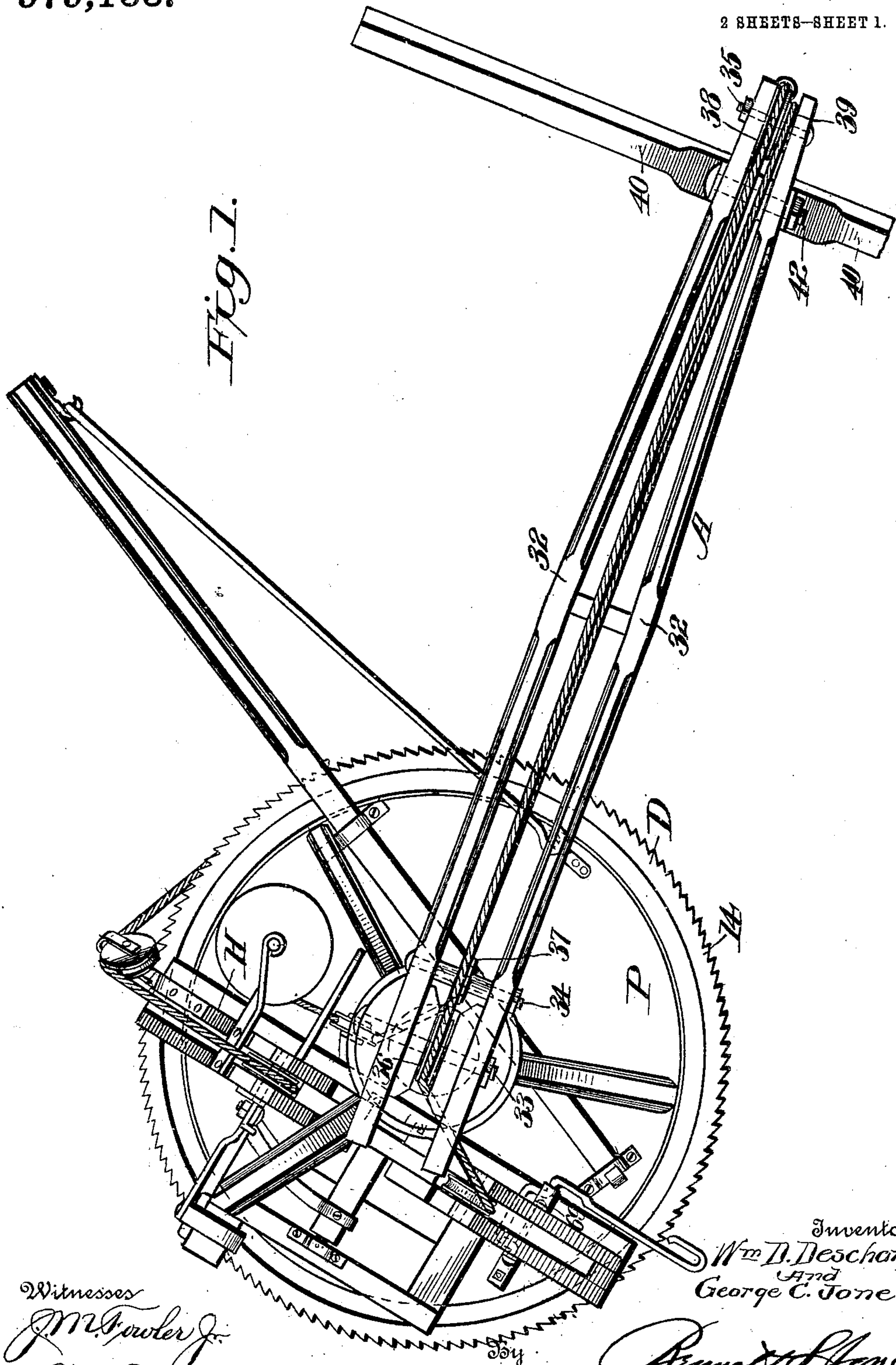
WELL DRILLING DERRICK.

APPLICATION FILED SEPT. 27, 1909.

979,133.

Patented Dec. 20, 1910.

2 SHEETS—SHEET 1.



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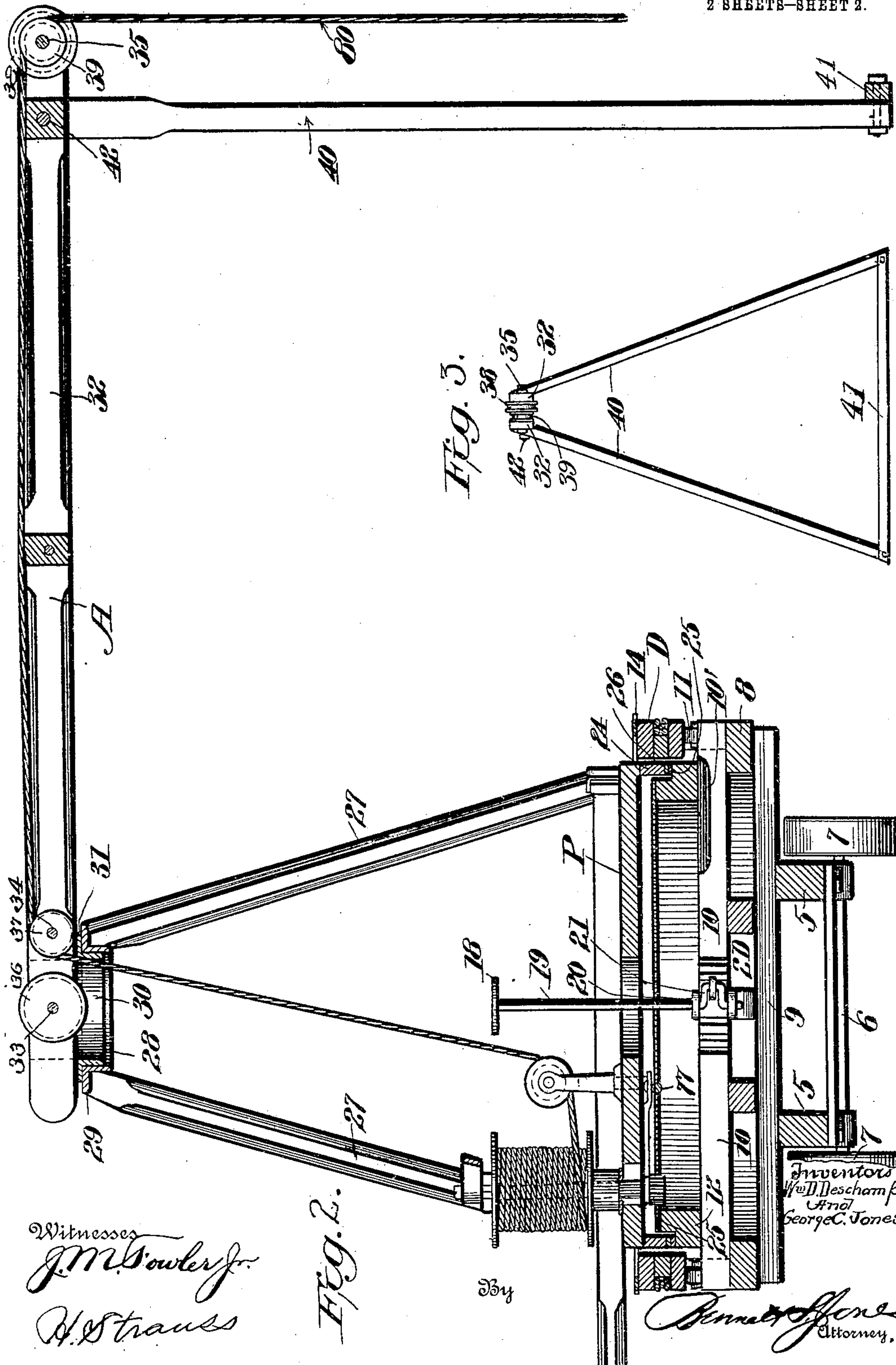
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# UNITED STATES PATENT OFFICE.

WILLIAM D. DESCHAMP, OF FORT SMITH, ARKANSAS, AND GEORGE C. JONES, OF  
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## WELL-DRILLING DERRICK.

979,133.

Specification of Letters Patent.

Patented Dec. 20, 1910.

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*To all whom it may concern:*

Be it known that we, WILLIAM D. DESCHAMP and GEORGE C. JONES, citizens of the United States, residing, respectively, at Fort Smith, in the county of Sebastian and State of Arkansas, and McAlester, in the county of Pittsburg and State of Oklahoma, have invented certain new and useful Improvements in Well-Drilling Derricks, of which the following is a specification.

This invention relates to well drilling machines, and it has for its object to provide a derrick of simple and improved construction, which may be conveniently transported from place to place and which may be quickly set up for use in the desired location.

A further object of the invention is to provide a derrick of improved construction arranged to carry well drilling machinery and which may be set up close to a building or other similar construction.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention; it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the claims may be resorted to when desired.

In the drawings—Figure 1 is a top plan view of a well drilling derrick constructed in accordance with this invention, the derrick being shown equipped with a well drilling machine. Fig. 2 is a vertical sectional view. Fig. 3 is a detail view in elevation, reduced, of the means for supporting the outer extremity of the derrick arm.

Corresponding parts in the several figures are denoted by like characters of reference.

The improved well drilling derrick is usually supported upon a truck-frame comprising suitably connected sills or side bars 5, 5, supported upon the axles 6, having transporting wheels 7, whereby the machine may be conveniently transported from place to place; but this supporting truck has not been shown in all the figures of the drawings in

order to bring out more clearly the other parts of the invention.

The base of the machine consists of a circular frame or rim 8, which has been shown as being supported upon cross bars 9, which latter may be supported upon the sills 5 of the truck. The rim or frame 8, supports a plurality of arms or spokes 10, which are mounted upon the upper surface of said frame and extend inward in the direction of the center. The rim or frame 8 also supports a plurality of rollers 11, upon which a rope-winding drum D is supported for rotation in a horizontal plane. The drum D is guided for rotation by a circular wheel or rim 12, which is firmly supported upon the spokes 10, and which supports an internally toothed stationary spur wheel 13.

The rope-winding drum D is provided upon its upper face with a ratchet wheel 14, the teeth of which project beyond the periphery of the drum so as to be capable of being engaged by a clutch or locking member to be hereinafter described. The said drum is also provided adjacent to its lower edge with a plurality of outward extending ratchet teeth 15, which are suitably spaced apart and capable of being engaged by a clutch lever 16, which is pivotally supported upon one of the spokes 10, which is extended in an outward direction beyond the frame 8, so as to form a bracket 17; for the purpose of actuating the clutch lever there is provided a hand-wheel 18, upon a vertical shaft 19, supported for rotation in bearings 20, and having a crank 21, which is connected by a link 22 with one end of the clutch lever 16; the latter may thus be conveniently manipulated to place its hooked end 23 in the path of the teeth 15, for the purpose of arresting the rotation of the drum; when desired, the said clutch lever may be moved out of the path of the teeth 15 so that it will not interfere with the rotation of the drum.

A circular platform P is provided adjacent to its outer edge with a downward extending flange 24, whereby it is supported for rotation upon the wheel or rim 12, which latter for this purpose is provided with a step or offset 25; metallic wear-plates 26 being mounted upon the opposed faces of the flange 24 and the step 25 for the purpose of reducing the friction between the parts; it will also be observed that the flange 24 is



fitted within the rope-carrying drum D, so that the parts will be mutually guided for rotation in an approximately horizontal plane.

5 It is to be understood that the parts just described are to be taken as typical of any form of well drilling machine and that these and similar parts are herein described for the purpose of indicating the applica-  
 10 tion of this derrick to use with such a machine. The platform P supports a derrick-frame comprising a plurality of inclined beams or uprights 27, the lower ends of which are firmly supported upon the plat-  
 15 form while the upper ends of said beams are bolted or otherwise secured upon a collar 28, having an annular flange 29 resting upon the upper extremities of the beams 27. Fitted in the collar 28 is a ring 30, having a flange  
 20 31, that engages the flange 29 of the collar. Firmly bolted or otherwise secured upon the flange 31 of the ring 30 is a derrick-arm A, which has been shown as being constructed of beams 32 suitably spaced apart  
 25 so as to afford bearings for the shafts 33 and 34 near the inner end of said derrick arm, and for a shaft 35, near the outer end of said arm. The shafts 33, 34, support guide-  
 30 wheels or pulleys 36, 37, and guide wheels or pulleys 38, 39, are likewise supported for rotation upon the shaft 35, said pulleys being utilized for guiding respectively the  
 35 drill rope and the sand line of the apparatus. The outer extremity of the derrick arm A is firmly supported by suitable braces or up-  
 40 rights 40. It will be readily observed that the ring 30 constitutes a bearing upon which the collar 28 of the derrick-frame is guided for rotation when the rotary platform is in  
 motion during the operation of the machine.

The uprights or braces 40 which serve to support the outer extremity of the derrick arm A, when the machine is in operation, are pivotally connected at their lower ends  
 45 with a cross-piece 41, adapted to rest upon the ground, while the upper ends of said uprights are connected with the derrick arm by means of a transverse bolt 42. By this simple construction the derrick arm will be  
 50 firmly supported; and the construction is such that when the machine is not in active use the parts may be disassembled by simply removing the bolt 42, and the uprights 40 may then be folded adjacent to the cross-  
 55 piece 41, and said uprights and cross-piece as well as the derrick-arm, which latter may be readily detached from its position on the derrick frame, may be stored upon the axles 6 between the sills 5, 5, of the truck which

also in this manner will support the parts 60 while the machine is being moved from place to place.

Having thus described the invention, what is claimed is:

1. In a machine of the character de- 65 scribed, a derrick frame supported for rotation and comprising a plurality of inclined upwardly converging beams or uprights, a relatively stationary derrick-arm having a ring, a flanged collar at the upper 70 end of the derrick frame affording a bearing for the ring, and supported means at the outer end or extremity of the derrick frame.

2. In a machine of the character de- 75 scribed, a platform supported for rotation in an approximately horizontal plane, a derrick frame supported upon the platform, and having a flanged collar at its upper end, a derrick-arm having a flanged ring engag- 80 ing the flanged collar the latter affording a bearing for the ring, inclined uprights connected detachably with the derrick-arm adjacent to the outer extremity of the latter and supporting the same in an approxi- 85 mately horizontal position, and a cross-bar pivotally connected with the lower extremities of the inclined uprights.

3. In a machine of the character de- 90 scribed, a platform supported for rotation in an approximately horizontal plane, a derrick frame mounted upon the platform and comprising a plurality of inclined upwardly converging uprights, a collar se- 95 cured upon the upper ends of the uprights and having a horizontal annular flange engaging the upper extremities of said up- rights, a drill arm comprising a pair of suitably connected spaced beams, an annular 100 flanged ring supported upon the under sides of the beams constituting the derrick-arm, the flanged collar of the derrick frame affording a bearing for the ring, and means for supporting the outer extremity of the 105 derrick arm to hold the latter stationary in an approximately horizontal position.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM D. DESCHAMP.

GEORGE C. JONES.

Witnesses as to signature of William D. Deschamp:

W. S. DESCHAMP,

HENRY RECTOR.

Witnesses as to signature of George C. Jones:

GEO. M. PORTER,

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