

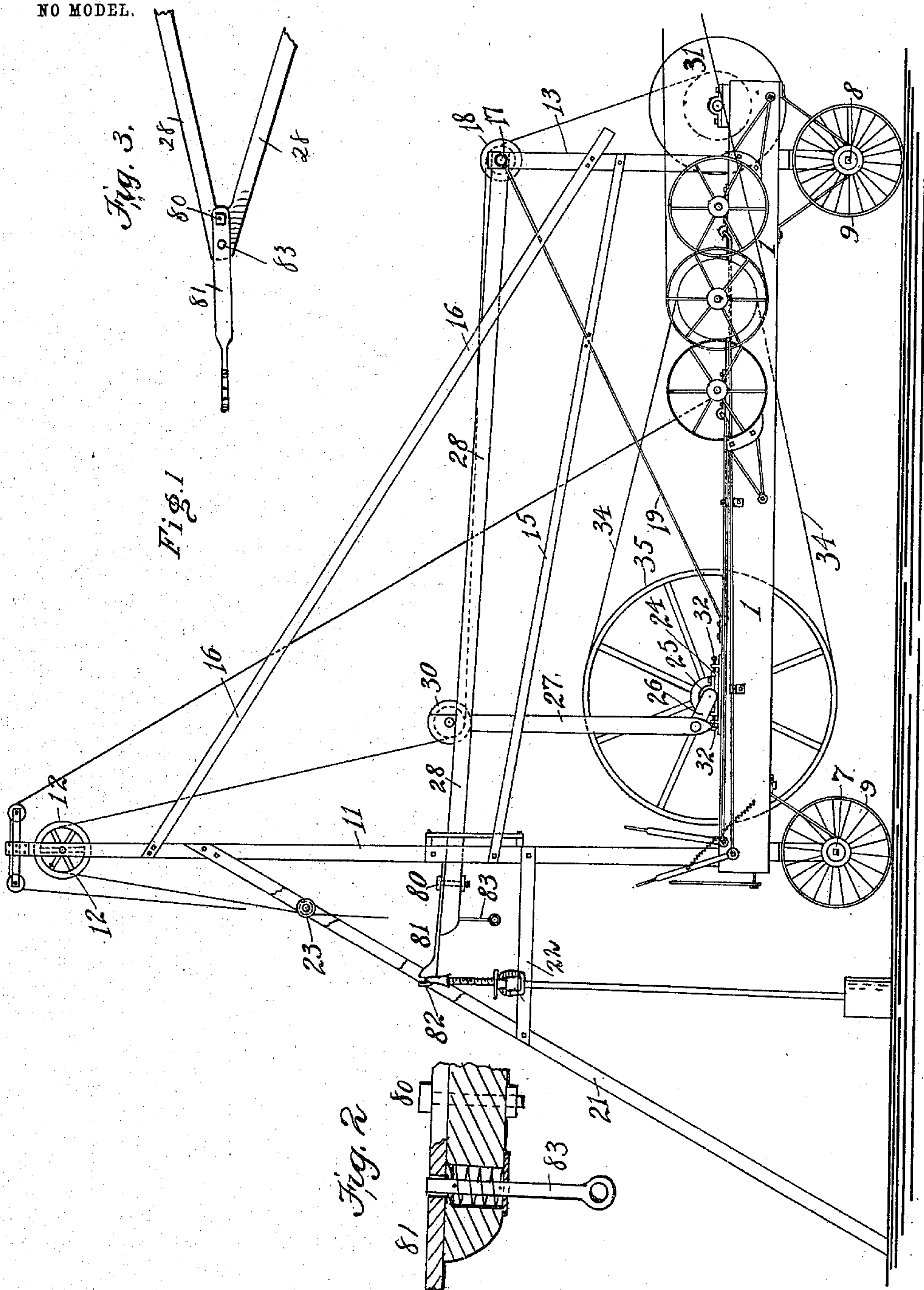
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H. KELLY.
APPARATUS FOR DRILLING WELLS.

APPLICATION FILED JULY 17, 1901.

NO MODEL.



WITNESSES:

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HENRY KELLY, OF LOS ANGELES, CALIFORNIA, ASSIGNOR TO THE KELLY AND TANEYHILL COMPANY, A CORPORATION OF IOWA.

APPARATUS FOR DRILLING WELLS.

SPECIFICATION forming part of Letters Patent No. 736,267, dated August 11, 1903.

Application filed July 17, 1901. Serial No. 68,679. (No model.)

To all whom it may concern:

Be it known that I, HENRY KELLY, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Apparatus for Drilling Wells, of which the following is a specification.

This invention relates to apparatus for drilling wells; and particularly to those known as "Artesian" wells; and some of the objects thereof are to provide an apparatus that will be simple and cheap in construction and at the same time positive and effective in operation, and to so support the temper-screw that it may be swung out of the way without disconnection to allow for the use of the buckets and introduction of the casing.

With these and other objects in view the invention consists, essentially, in the construction, combination, and arrangement of parts, substantially as hereinafter more fully described in the following specification and illustrated in the accompanying drawings, forming part of this application, in which—

Figure 1 of the drawings is a side elevational view of a well-drilling apparatus embodying my improvements. Fig. 2 is a sectional view of walking-beam, showing the construction of the spring-latch; and Fig. 3 is a plan view of end of walking-beam.

Similar characters of reference designate corresponding parts throughout the several views.

The invention is illustrated as applied to portable drilling apparatus, but it is to be understood that the same is in no manner limited thereto, but this form of apparatus is merely shown as a type of that which may be employed in connection with this invention.

Referring to the drawings, the reference character 1 designates one of the side pieces or timbers connected by cross-pieces and an intermediate cross-piece or header, (not shown upon the drawings,) which is connected with the front cross-piece by a timber; but the frame described may be constructed in any other suitable manner, that shown and described being typical only. Formed on or connected with the front and rear portion of the frame in any desired manner are axles 7 and 8, carrying wheels 9, by means of which the ap-

paratus may be conveyed from place to place. Preferably secured to the forward portion of the frame in any suitable manner is a ladder or derrick 11, in the upper portion of which is preferably mounted a sheave-wheel 12, and upon the rear portion of the frame may be mounted parallel uprights 13, which are preferably connected by braces 15 and 16 with the ladder or derrick 11.

Iron braces or supports 19 may be attached to the side piece 1 and to its corresponding side piece (not shown) and to the uprights 13 to strengthen the latter against a pull of the rope or cable passing over the sheave 18, and crossed rods may be connected with said uprights and with the ends of the said side pieces to afford additional support to said uprights. Inclined supports 21 may be connected with the ladder or derrick 11 in front of the apparatus, and braces 22 may be connected with the ladder and said supports to afford additional rigidity to the parts, and a sheave 23 may be mounted in the upper portion of said supports to afford a guide for the rope or cable passing over a sheave 12 in the upper portion of the ladder.

Journaled in suitable bearings 24 is a shaft 25, carrying a crank 26, movably connected with one end of a pitman 27, connected with a walking-beam 28, preferably embodying two pieces or timbers united at the free end thereof and movably mounted at their diverging end upon the shaft or rod 17 in order that the walking-beam 28 may move up and down within the ladder or derrick 11 when the shaft 25 is rotated, thereby imparting motion to the crank 26 and pitman 27, which is connected with the walking-beam, as before explained.

A sheave 30 is preferably mounted in the free end of the pitman 27 to receive the rope or cable which passes from the winding-drum 31 up over the sliding sheave 18, under the pitman-sheave 30, thence over the derrick-sheave 12, and finally over the guide-sheave 23 to the tool in use. By means of this construction the tool may be elevated and allowed to descend by the depression and elevation of the walking-beam, while the rope or cable connected with the tool remains stationary upon the drum.

The bearings 25 of the crank-shaft are preferably mounted upon one of the side pieces and a short parallel timber, and by reason of the adjusting-screws 32 the bearings of the crank-shaft may be moved toward or from a clutch-pulley to tighten or slacken the driving-belt 34, passing over the said clutch-pulley and the driving-wheel 35 upon the crank-shaft 25, whereby motion is imparted to said shaft, thence to the pitman 27 and to the walking-beam 28.

Movably connected with the free end of the walking-beam 28 by means of a bolt or other device 80 is an arm or bar 81 of any preferred form of construction, or any equivalent device may be employed instead of said arm or bar, and the arm or bar 81 is preferably pivoted, near one end thereof, to the free end of the walking-beam, substantially as shown in the drawings, and the same is preferably provided with a hooked end 82 to receive the connection of the temper-screw.

Mounted in the end of the walking-beam is an eye bar or rod 83, preferably spring-retracted in order to engage a recess in the arm or bar 81 to prevent the lateral movement thereof; but when it is desired not to use arm 81 the rod 83 is pulled out of engagement with said arm 81 and the latter is turned to one side out of the way, whereupon the end of the walking-beam is left free and clear for the operation of the buckets or for the introduction of the casing. The importance of this feature will be readily appreciated by those skilled in the art to which the invention appertains, as no delay is occasioned by disconnecting the parts when it is desired to use other devices.

It is not desired to confine this invention to the specific construction, combination, and arrangement of parts herein shown and described, and the right is reserved to make all such changes in and modifications of the same as come within the spirit and scope of this invention.

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. An apparatus for drilling wells provided with a walking-beam, an arm pivoted near one end of said beam, and in the longitudinal

center thereof, the free end of said arm extending beyond the free end of said beam, when the arm is in operative position, and said arm adapted to be swung horizontally when not in use.

2. An apparatus for drilling wells provided with a walking-beam, a laterally-movable arm, carrying an implement and connected near one end of said beam about the longitudinal center thereof, the said arm adapted to be swung horizontally and laterally with the implement when the latter is not in use.

3. An apparatus for drilling wells provided with a walking-beam, an arm having a recess in one end thereof, and movably connected with said beam about the longitudinal center thereof, the said arm carrying an implement in said recess, whereby the implement depends from the end of said beam when in use and adapted to be swung horizontally to either side of said beam when not in use.

4. An apparatus for drilling wells provided with a walking-beam, an arm pivotally mounted in the longitudinal center of said beam and extending beyond the free end thereof, said arm having a recess in one end thereof, an implement supported in said recess, whereby said arm is supported at or near the end of the beam and in substantially the same longitudinal plane therewith when in operative position, and adapted to be swung horizontally with said beam when not in use.

5. An apparatus for drilling wells provided with a walking-beam, an arm pivotally mounted in the longitudinal center of said beam adjacent to the free end thereof, an implement supported by said arm in the free end thereof and in the longitudinal center of said beam, when the implement is in use adapted to be swung laterally and horizontally to said beam when not in use and means for preventing the accidental deflection of said parts.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY KELLY.

Witnesses:

S. H. GARRETT,
L. B. ALDERETE.