

No. 706,438.

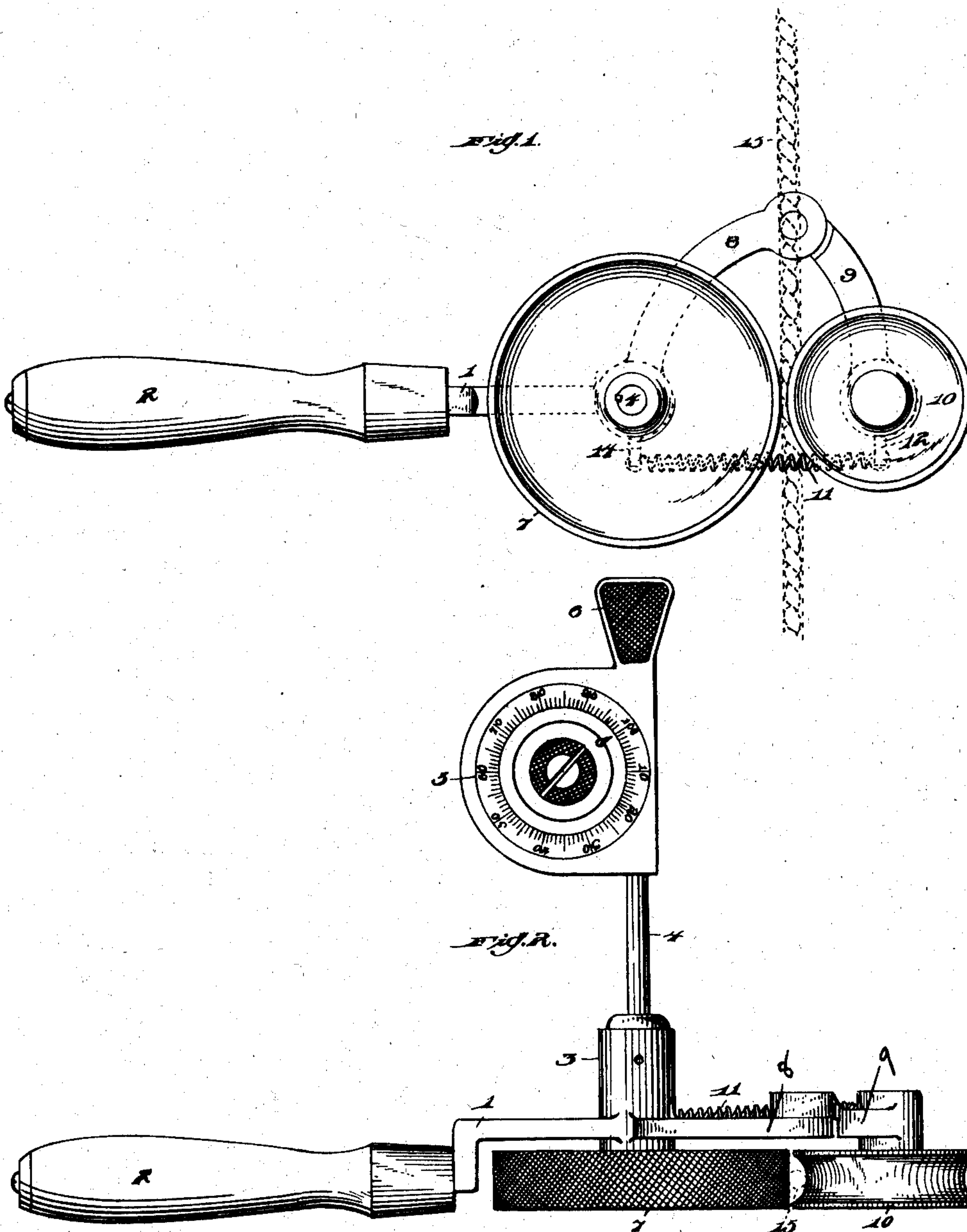
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S. McCAUGHTRY.

MEASURING DEVICE FOR ARTESIAN WELLS.

(Application filed Oct. 16, 1901.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

SAMUEL McCAUGHTRY, OF WASHINGTON, PENNSYLVANIA.

MEASURING DEVICE FOR ARTESIAN WELLS.

SPECIFICATION forming part of Letters Patent No. 706,438, dated August 5, 1902.

Application filed October 16, 1901. Serial No. 78,857. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL McCAUGHTRY, a citizen of the United States of America, residing at Washington, in the county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Measuring Devices for Artesian Wells, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in measuring devices, and relates particularly to a device adapted for the measuring of wells, such as Artesian wells, oil and gas wells, and the like. In the drilling of such wells it is often desirable to determine the exact depth of the well. This has heretofore been a difficult matter, as the exact depth could only be approximated.

The object of my invention is to construct a device which is adapted to be applied to a rope or cable as being withdrawn from the well, and this rope or cable actuates the driving-wheel to operate the register or indicator, the latter being of any approved form.

Briefly described, my invention comprises a handle for holding the device with a shaft journaled in this support for the handle and operatively connected to an indicator or registering device, a drive-wheel mounted on the shaft, and a pulley-wheel mounted in alinement with the drive-wheel and having its supporting-bracket connected by a spring or like means to the main support, so that the pulley-wheel is normally held against the drive-wheel, and when the rope or cable is placed between the two wheels the tension of the spring is against the pulley-wheel, so as to cause the rope or cable to frictionally engage the drive-wheel and rotate the same to actuate the shaft and indicator.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate corresponding parts throughout the several views, in which—

Figure 1 is a detail side elevation of my improved measuring device, showing the same in an operative position with the rope or cable in dotted lines. Fig. 2 is a top plan view of the same.

To put my invention into practice, I provide a suitable frame or support 1, which carries a handle 2 and a hub 3. Journaled in this hub 3 is an operating-shaft 4, which extends into the casing of the indicator or register 5. This indicator or register may be of any approved form of construction which operates with a shaft extending into the same to actuate the mechanism. The casing of the indicator is preferably provided with a thumb and finger hold 6, so as to permit the operator to easily hold the device in a position which is shown in Fig. 2 of the drawings, the one hand being engaged with the hold 6 and the other hand with the handle 2. The shaft 4 is keyed or otherwise rigidly mounted upon the end of the extension through the hub 3 and drive-wheel 7, the periphery of which is preferably milled or corrugated, so as to form a roughened surface for engagement with the rope and prevent the slipping of the latter upon the wheel. The frame or support 1 carries an upwardly-extending arm 8, to which is pivotally secured a bracket-arm 9, this bracket-arm carrying at its lower end a short shaft or axle upon which is journaled the pulley-wheel 10. This pulley-wheel is normally held in contact with the drive-wheel 7 by a spring 11, which is connected to lugs 12 14, carried by the bracket-arm 9 and hub 3, respectively. The rope or cable 15 is adapted to be placed between the wheels 7 and 10, as shown in the drawings, and to so insert this rope or cable the pulley-wheel is pulled outwardly away from the wheel 7, the spring serving to normally hold the pulley-wheel in engagement with the rope when the latter is in position between the wheels.

When measuring, the device is usually applied to the sand-bailer rope or cable. When the sand-bailer has been lowered to the bottom of the well and the rope or cable is drawn taut, the operator can readily tell by grasping the rope by the hand the exact time at which the bailer is free from the bottom of the well and its entire weight is on the rope or cable. Previous to this he has the device in position, so that when the rope is grasped between the two wheels the frictional contact of the rope or cable with the drive-wheel revolves the latter as the rope ascends, thus rotating the shaft 4, actuating the indicator or

register 5. By this means the operator may observe the movement of the indicator or register as the rope ascends, and thus determine the exact depth of the well.

5 In the practice of my invention it will be observed that various changes may be made in the details of construction without departing from the general spirit of my invention.

Having fully described my invention, what
10 I claim as new, and desire to secure by Letters Patent, is—

1. In a device for measuring the depth of wells, a frame having a handle secured to one end thereof and a shaft journaled in the
15 other end, one end of said shaft extending into the casing of a register for the purpose of operating the register, a drive-wheel rigidly mounted on said shaft, an upwardly-extending arm secured to the frame, a downwardly-extending bracket-arm pivotally secured to the upper end of said first-named arm, a pulley journaled in the lower extremity of said bracket-arm between which and said
20 drive-wheel the rope passes, and a spring connected to said bracket-arm for normally hold-

ing the rope in engagement with the drive-wheel, substantially as described.

2. In a device for measuring the depths of wells, a frame having a handle secured to one end thereof, a hub carried by the other end
30 of the frame and having a shaft journaled therein, a drive-wheel having a milled periphery secured to one end of said shaft, the other end of said shaft extending into the casing of the register, for the purpose of operating the register, an arm carried by the
35 hub and extending above said drive-wheel, a bracket-arm pivotally secured to said arm and carrying a revoluble pulley in alignment with said drive-wheel, lugs carried by the
40 hub and the bracket-arm, and a spring connected to said lugs for holding the rope between said drive-wheel and pulley, substantially as described.

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

SAMUEL McCAUGHTRY.

Witnesses:

JOHN NOLAND,
E. E. POTTER.