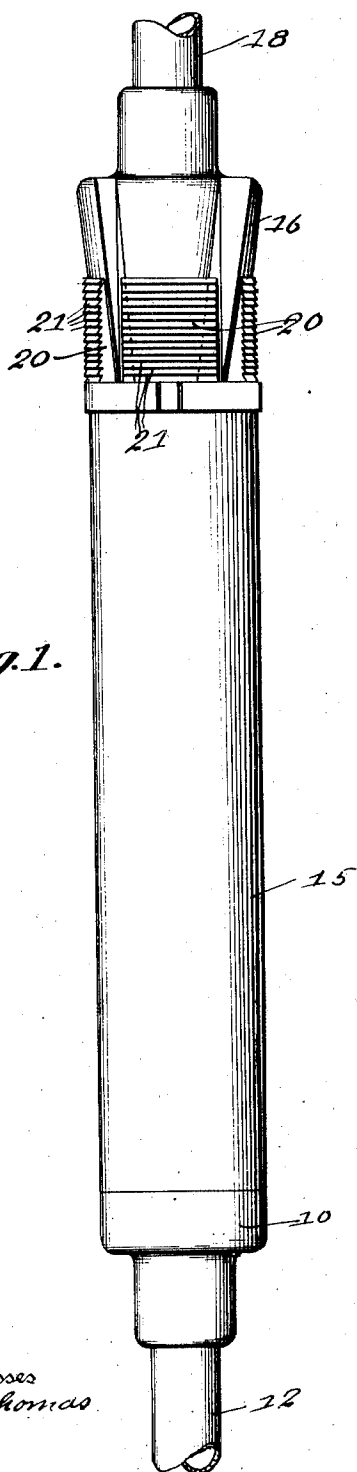


1,367,399.

Patented Feb. 1, 1921.

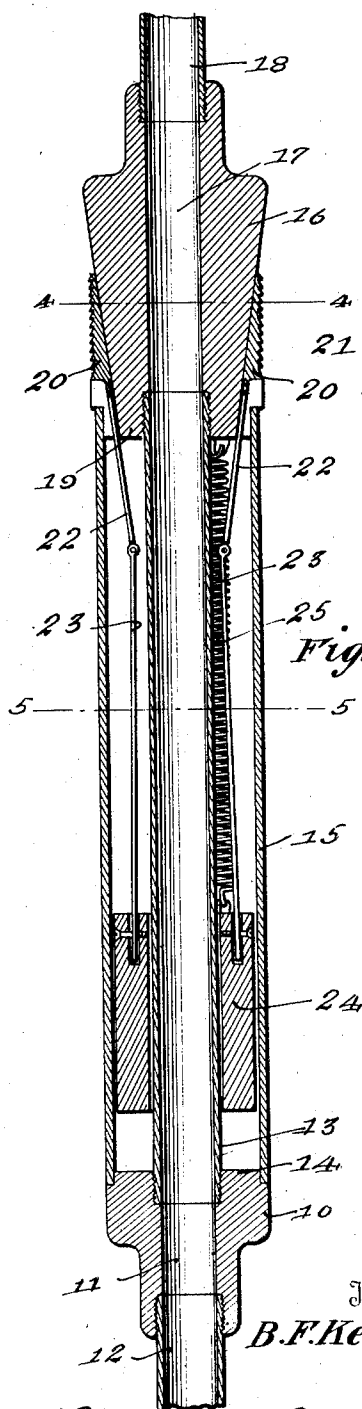
2 SHEETS—SHEET 1.

Fig. 1.



Witnesses
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Fig. 2.



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WELL TUBING CATCHER.
APPLICATION FILED NOV. 4, 1919.

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Patented Feb. 1, 1921.
2 SHEETS—SHEET 2.

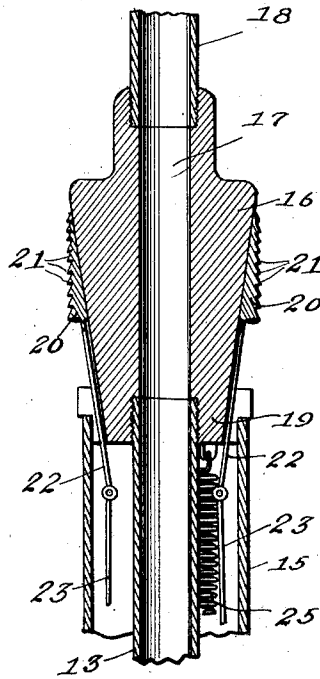


Fig. 3.

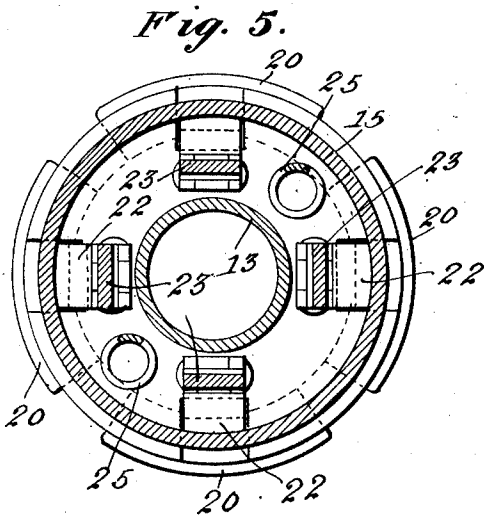


Fig. 5.

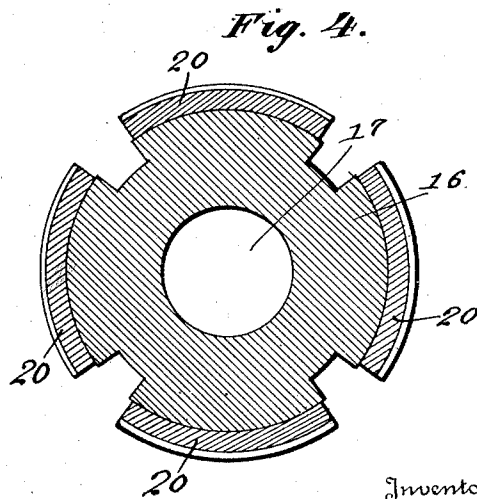


Fig. 4.

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UNITED STATES PATENT OFFICE.

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WELL-TUBING CATCHER.

1,367,399.

Specification of Letters Patent.

Patented Feb. 1, 1921.

Application filed November 4, 1919. Serial No. 335,713.

To all whom it may concern:

Be it known that I, BENJAMIN F. KELLEY, a citizen of the United States, residing at Tulsa, in the county of Tulsa and State of Oklahoma, have invented new and useful Improvements in Well-Tubing Catchers, of which the following is a specification.

This invention relates to well apparatus and has for its object the provision of a novel and improved device adapted for disposition within a well casing and through which the well tubing extends, whereby in the event of breakage of the well above the device, the device will automatically expand and grip the well casing so as to prevent the tubing dropping and consequently clogging the well.

An important object is the provision of a device of this character which includes gripping jaws normally held rigidly engaged with the well casing by means of a pendant weight and springs and which further includes a tapered head engaging the jaws and movable in the event of breakage of the tubing to expand the jaws into gripping relation with the casing.

Another object is the provision of a device of this character in which the working parts are inclosed so as to exclude dirt or other foreign matter and consequently improve the efficiency and durability of the device.

An additional object is the provision of a device of this character which will be simple and inexpensive in manufacture and installation, economical and labor saving in use, and a general improvement in the art.

With the above and other objects and advantages in view, the invention consists in the details of construction to be hereinafter more fully described and claimed, and illustrated in the accompanying drawings in which—

Figure 1 is a side elevation of the device, Fig. 2 is a longitudinal sectional view with the parts shown in one position,

Fig. 3 is a fragmentary longitudinal sectional view of the upper portion showing the parts in gripping position, and

Figs. 4 and 5 are cross sectional views on the lines 4—4 and 5—5, respectively, of Fig. 2.

Referring more particularly to the drawings, the numeral 10 designates the lower head on the device which is formed as a cy-

lindrical body having a bore 11. Threaded into the lower end of the bore 11 is a lower tubing section 12 and threaded into the upper end of the bore 11 is a tubing section 13. Formed on the head 10 is a reduced extension 14 defining a shoulder and surrounded by a cylindrical casing 15 which has its lower end abutting against the shoulder.

Secured upon the upper end of the tubing section 13 is the upper head 16 formed as a tapered body having a cylindrical bore 17 within the lower end of which is threaded the tubing section 13 and into the upper end of which is threaded the upper tubing section 18 which extends to the top of the well. Formed on the lower end of the head 16 is a reduced extension 19 fitting within the upper end of the casing 15 and this extension defines a shoulder abutting against the upper end of this casing.

Disposed against the outer surface of the upper head 16 are slidably mounted jaws 20 which have their inner faces inclined for conforming engagement with the outer periphery of the head 16 and which have their outer faces provided with ratchet teeth 21. Formed upon these jaws are downwardly extending arms 22 which are pivotally connected at their lower ends with rods 23 which extend downwardly between the tubing section 13 and the casing 15 and which carry at their lower ends a sleeve 24 slidable upon the tubing section 13. I also provide a plurality of coil springs 25 which are connected at their upper ends with the lower end of the head 16 and which are connected at their lower ends with the top of the sleeve 24.

In the use of the device it is disposed within the well casing near the bottom thereof, whereupon the sleeve 24 will maintain the jaws 20 rigidly in engagement with the inner surface of the well casing. In the event of breaking of the upper tubing 18, the sudden downward movement of the head 16 will cause the jaws 21 to be forced outwardly owing to the fact that the head is tapered and the jaws have inclined inner faces. This jamming of the jaws against the inner periphery of the well casing will prevent the tubing from falling more than a distance of approximately three inches. It will be observed that the working parts of

the device are entirely inclosed so as to exclude foreign matter and prevent injury to the mechanism.

While I have shown and described the preferred embodiment of my invention, it is of course to be understood that I reserve the right to make such changes in the form, construction, and arrangement of parts as will not depart from the spirit of the invention or the scope of the subjoined claim.

Having thus described my invention, I claim:

A device of the character described comprising a lower head having a bore, said head being connected with the lower tubing section of a well, a tubing section secured in said bore and extending upwardly, a cylindrical casing encircling and engaging the upper portion of said lower head, an upper head formed as a downwardly tapered body having a bore secured upon the upper end

of said second named tubing section and connected with the lower end of the upper tubing of the well, a reduced extension on the lower end of said upper head, fitting within said casing and defining a shoulder abuttingly engaging the upper end thereof, the lower portion of said upper head being provided with slots, a plurality of gripping jaws slidably engaging said upper head and having toothed outer faces and inclined inner faces engaging the head, arms extending downwardly from said jaws and disposed within said slots, rods connected with the lower ends of said arms, a sleeve slidable upon said second named tubing section and connected with said rods, and a plurality of springs connected with said sleeve and said upper head.

In testimony whereof I affix my signature.

BENJAMIN F. KELLEY.