

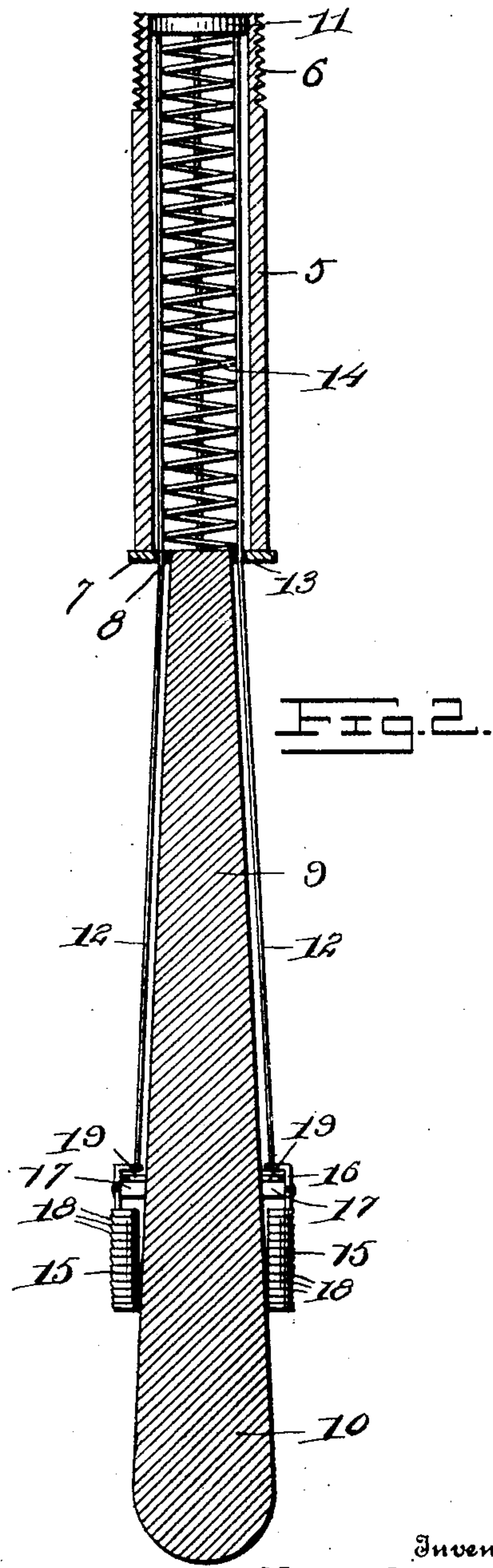
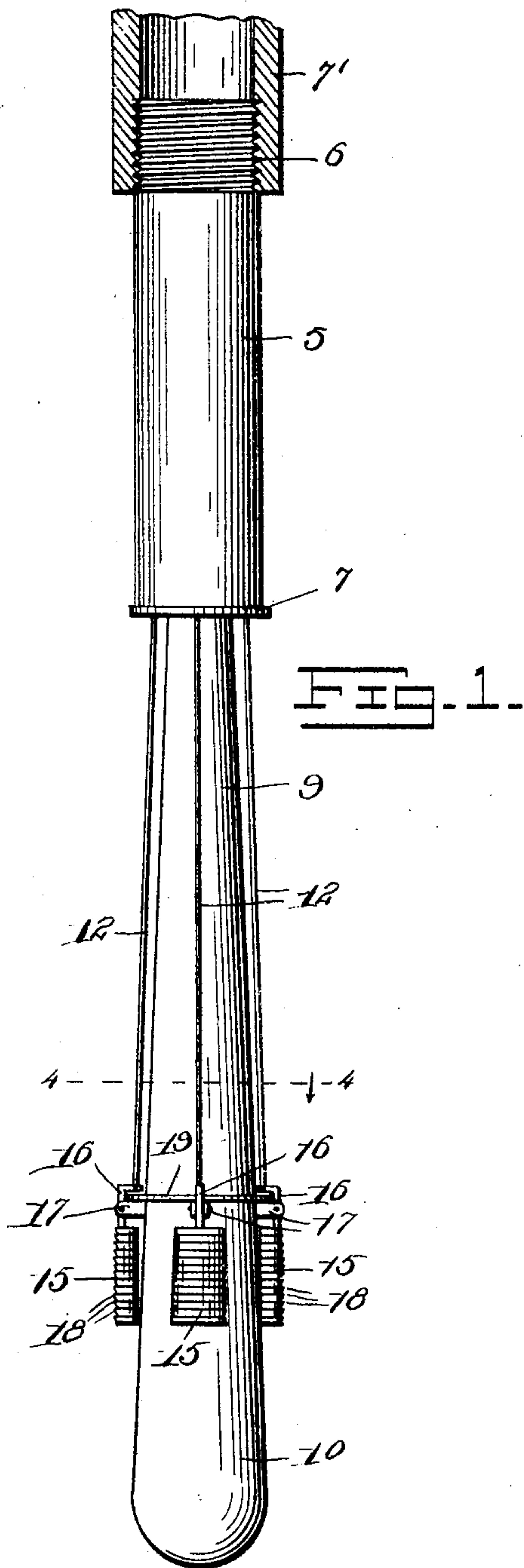
No. 803,450.

PATENTED OCT. 31, 1905.

J. STEGNER.  
CASING SPEAR.

APPLICATION FILED MAY 3, 1905.

2 SHEETS—SHEET 1.



Witnesses  
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*E. M. Colford*

Inventor  
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By *Charles Chandler*  
Attorneys

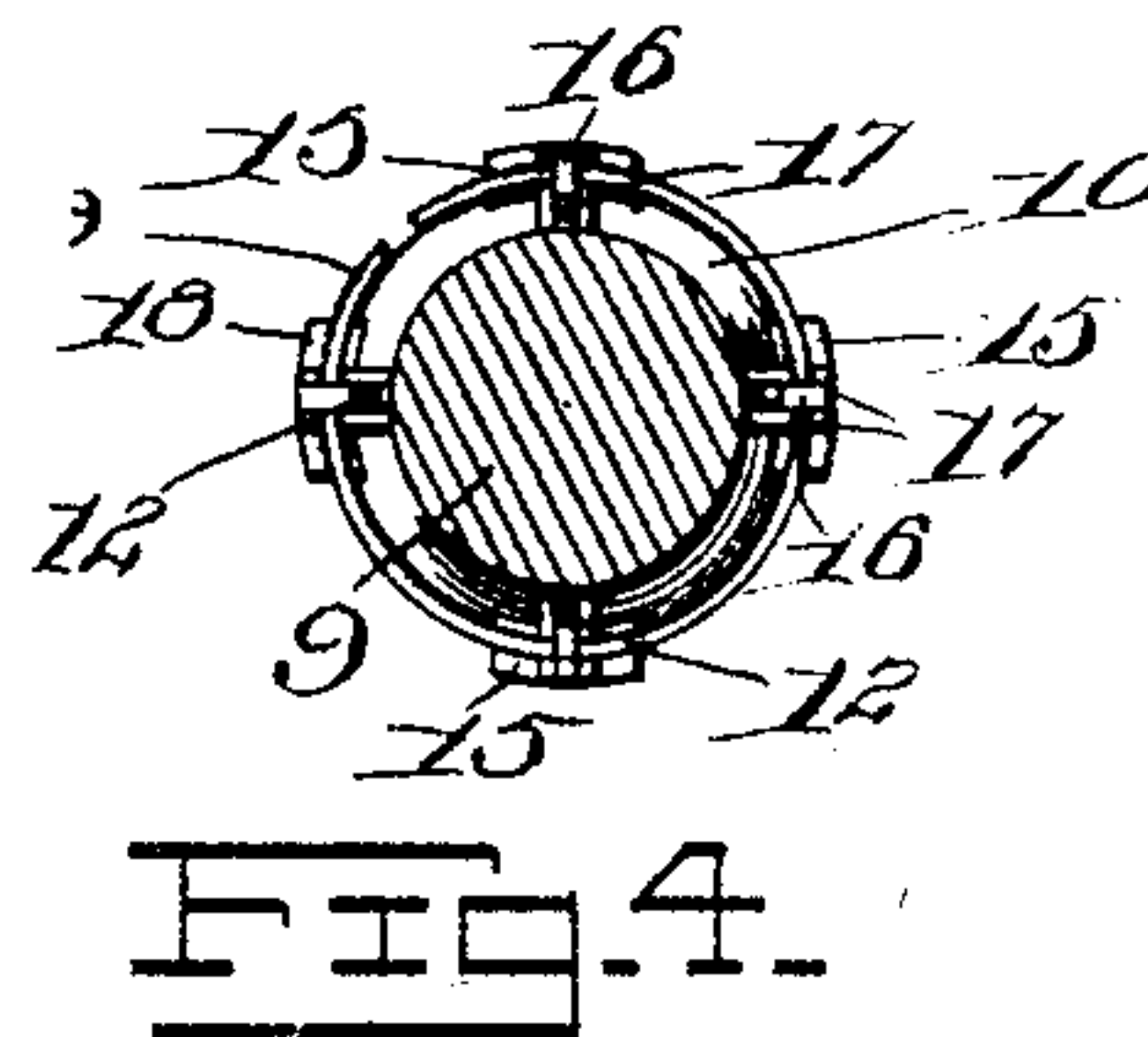
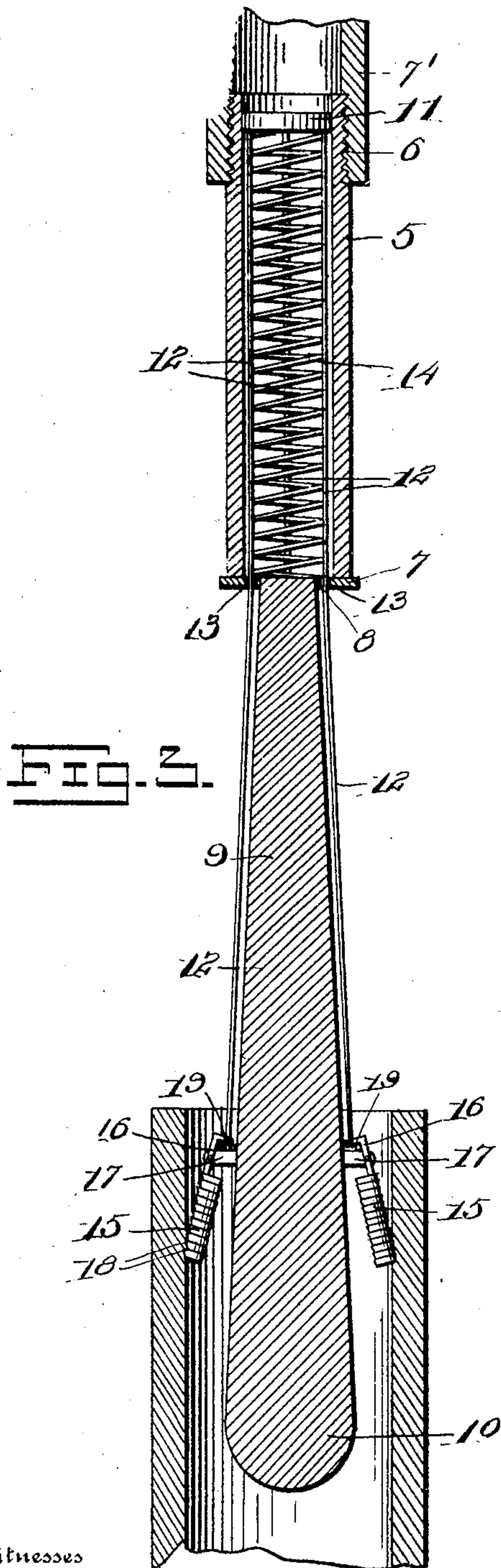
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# UNITED STATES PATENT OFFICE.

JOHN STEGNER, OF LEWISVILLE, OHIO.

## CASING-SPEAR.

No. 803,450.

Specification of Letters Patent.

Patented Oct. 31, 1905.

Application filed May 3, 1905. Serial No. 258,707.

*To all whom it may concern:*

Be it known that I, JOHN STEGNER, a citizen of the United States, residing at Lewisville, in the county of Monroe, State of Ohio, have  
5 invented certain new and useful Improvements in Casing-Spears; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to  
10 make and use the same.

This invention relates to grips, and more particularly to those designed for use in removing loose casings from deep wells, and has for its object to provide a grip of this kind  
15 which may be operated by fluid-pressure to securely engage a casing.

Another object is to provide a grip which will be simple in arrangement and which may be manufactured at a low figure.

20 Other objects and advantages will be apparent from the following description, and it will be understood that changes in the specific construction shown and described may be made within the scope of the claims, and that any  
25 suitable materials may be used without departing from the spirit of the invention.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several  
30 views, Figure 1 is a side elevation of the present grip. Fig. 2 is a longitudinal section of Fig. 1. Fig. 3 is a view similar to Fig. 2, showing the grip engaged at its upper end with a casing and having its gripping mem-  
35 bers engaged within a second casing, the latter being shown in section. Fig. 4 is a section on line 4 4 of Fig. 1 looking toward the gripping members.

Referring now to the drawings, the present  
40 invention comprises a vertically-extending cylinder 5, which is exteriorly threaded at its upper end, as shown at 6, for engagement in the lower end of a section of casing 7', as shown. The lower end of the cylinder is  
45 closed by a plate 7, having a central circular opening 8 therein, in which there is engaged the upper end of an upwardly-tapered stem 9, enlarged into a head 10 at its lower end.

Slidably disposed within the cylinder 5 there  
50 is a piston 11, which has engaged therein the upper ends of a plurality of rods 12, which extend downwardly through perforations 13 in the plate 7 and which are arranged in a series surrounding the stem 9. A helical

spring 14 is disposed within the cylinder be- 55  
tween the piston 11 and the plate 7 and holds the piston yieldably at the upward limit of its movement.

A plurality of gripping members 15 are pro- 60  
vided, having upwardly-extending stems 16, which are pivoted between spaced ears 17, carried by the stem 9 adjacent to its lower end, and the outer faces of these members 15 are transversely convex and are provided with transverse upwardly-directed teeth 18. The 65  
lower ends of the rods 12 are pivoted to the stems 16 in such a way that when the rods are moved downwardly, as will be presently described, the stems 16 will be moved inwardly toward the stem 9 and the gripping members 70  
15 will be moved to extend outwardly from the stem 9.

Engaged with the stem 9 there is a split spring-ring 19, which lies within the inclosure of the stems 16 and rests against the inner 75  
faces thereof, the action of this spring-ring being to hold the members 15 yieldably against the stem 9, as will be readily understood.

In use the upper end of the cylinder 5 is engaged with the lower end of a casing, and the 80  
instrument and casing are then introduced into a well from which a loose section of casing is to be withdrawn, the lower portion of the instrument and the gripping members being in- 85  
troduced into the upper end of the loose casing. The downwardly-extending head 10 of the instrument protects the gripping mem-  
bers 15, which might otherwise come into en- 90  
gagement with the bottom of the well or with obstructions in the loose casing. After the instrument has been thus disposed water or other fluid is directed into the casing 7' and the pressure of this fluid upon the piston 11 moves this piston downwardly, this operation rocking the stems 16 upon their pivots with 95  
their upper portion moving inwardly and bringing the teeth of the members 15 into engagement with the inner face of the loose casing. The fluid within the casing 7', as will be understood, is under sufficient pressure to 100  
cause the members 15 to tightly engage the casing in order that they may not slip therefrom. It will be understood that the move-  
ment of the stems 16, as just described, is against the action of the spring 14 and that 105  
when the pressure within the casing 7' is removed this spring will return the gripping members to their original positions to release

the loose casing, it being understood that this pressure is removed after the loose casing has been withdrawn from the well.

What is claimed is—

- 5 1. A device of the class described comprising a stem arranged for introduction into a well-casing, gripping members carried by the stem and movable with respect thereto into and out of position to engage the inner sur-  
10 face of a casing within which the stem lies, means for holding the members yieldably out of such position and means operable by fluid-pressure for moving the gripping members against the action of the holding means.
- 15 2. A device of the class described compris-

ing a stem adapted for engagement within a well-casing, casing-engaging members carried by the stem and movable into and out of operative position, means for holding said members yieldably in inoperative position and 20 means operable by fluid-pressure for moving the members against the action of the holding means.

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

JOHN STEGNER.

Witnesses:

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CHARLES W. STEGNER.