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E. D. COOGAN.

GRAPPLE.

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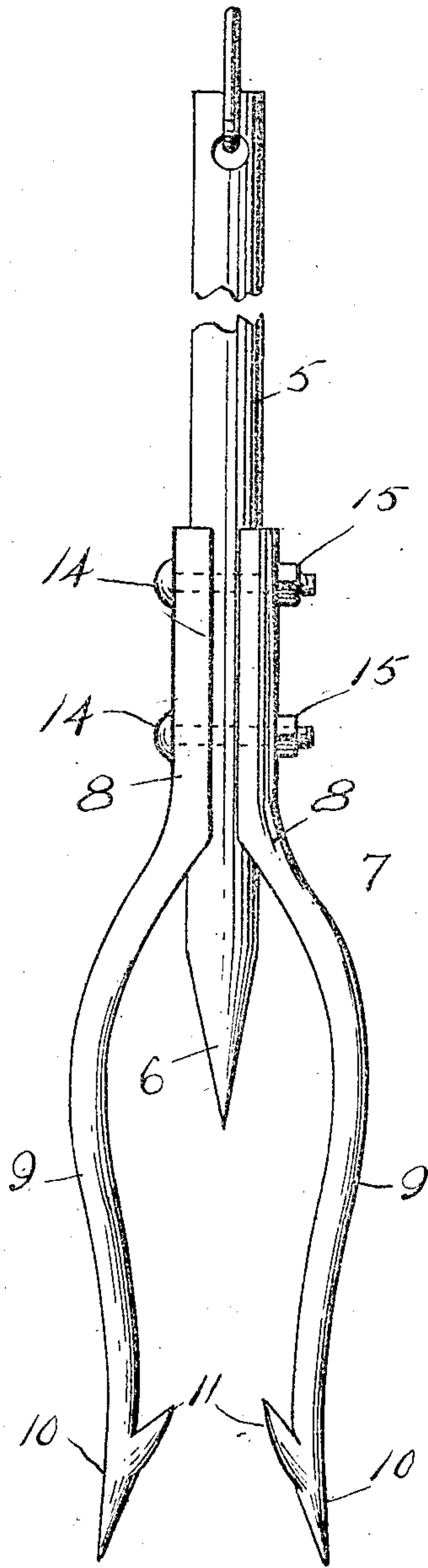


Fig. 1

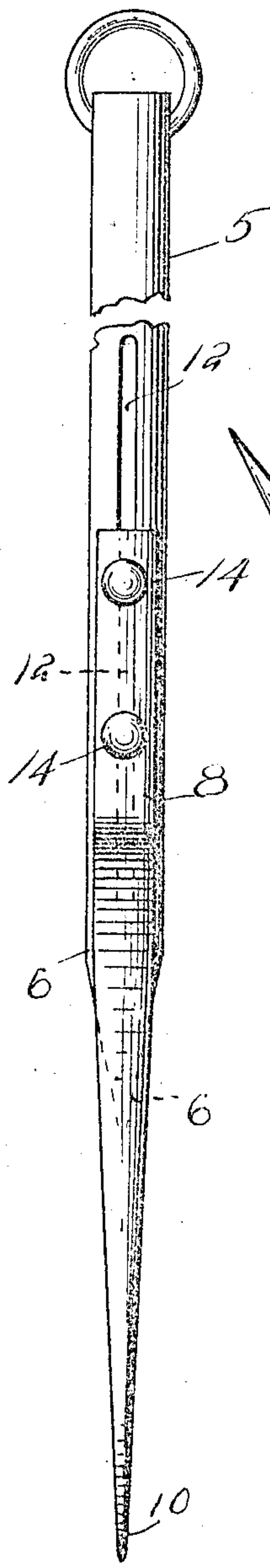


Fig. 2

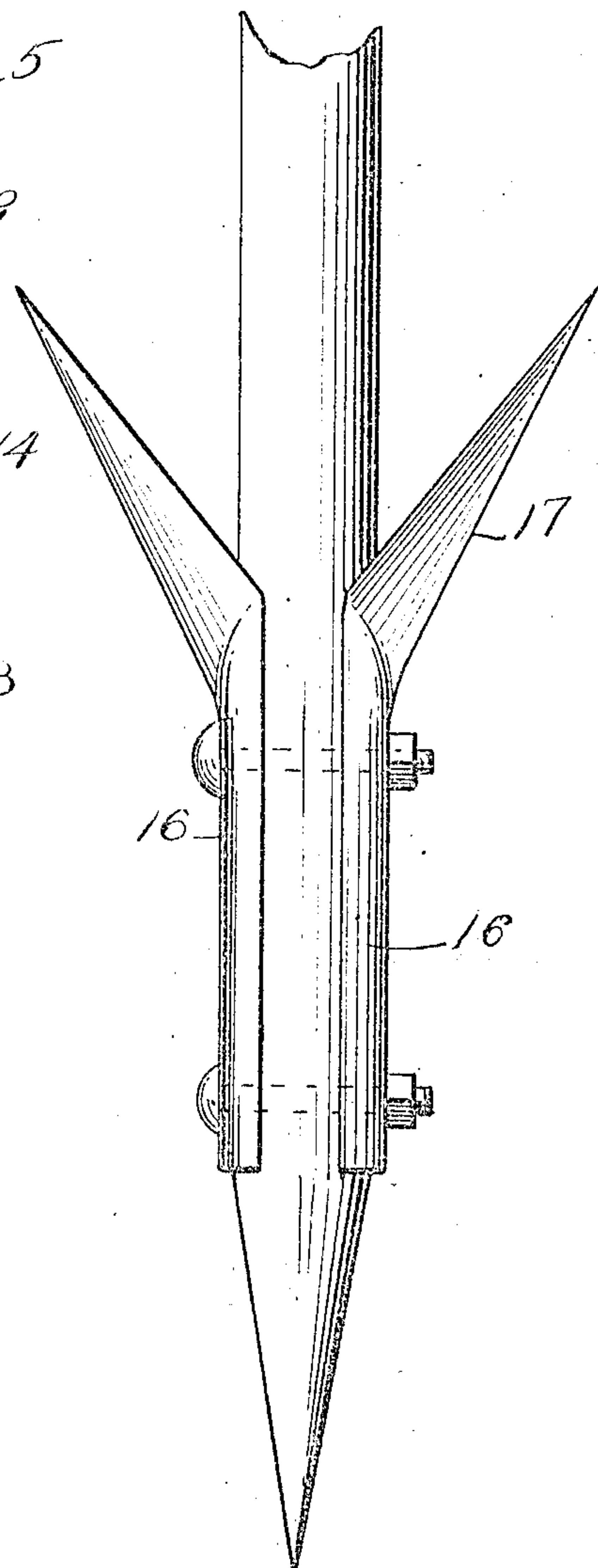


Fig. 3

Witnesses

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GRAPPLE.

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To all whom it may concern:

Be it known that I, EDWARD D. COOGAN, a citizen of the United States, residing at Caulksville, in the county of Logan, State of Arkansas, have invented certain new and useful Improvements in Grapples; 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 make and use the same.

The present invention has reference to grapples and it aims to provide an exceedingly simple, inexpensive and durable implement of that nature adapted especially for use in removing rubbish of various sorts from the bottom of a well.

More particularly, however, the invention resides in the provision of a split sleeve formed of spring metal, each section of the sleeve including a depending arm having its lower ends bent slightly outwards, so that when said ends are brought into contact with the body in the well, the arms will move away from each other and pass on opposite sides of the body, thus serving as clamps.

The invention further resides in the formation upon each of said arms of an inwardly and upwardly inclined barb which is located slightly above the bent end of the arm, said barbs acting as supports for the body engaged by the arms.

The invention will be readily understood from a consideration of the following detailed description and its preferred embodiment is illustrated in the accompanying drawings in which like parts are designated by corresponding reference numerals in the several views.

Of the said drawings:—Figure 1 is a front elevation of the grapple. Fig. 2 is a side elevation thereof. Fig. 3 is an enlarged detail view of the chopping sleeve.

Referring more particularly to the drawings, 5 indicates the pole of the implement whose lower end is pointed as indicated by the numeral 6, the pole being formed of iron or other metal and having an eye bolt at its upper end to which a rope is secured.

The pole is provided towards its pointed end with a sleeve 7 formed of spring metal, the sleeve shown in the present instance consisting of a pair of oppositely disposed semi-cylindrical sections 8 each of which is provided with a depending arm 9 whose free end 10 is bent or inclined slightly outwards.

Upon the inner face of each arm adjacent such end are formed upwardly and inwardly directed barbs, 11 the barbs being disposed directly opposite each other as shown.

By reason of the above described inclination of the arm ends, the arms will move away from each other when brought into contact with a body in the well and will pass upon opposite sides thereof until the barbs are disposed beneath the body, whereupon the arms will be free to move towards each other and clamp the body therebetween, the body resting in such position upon the barbs as will be understood.

The ends of the arms are pointed so as to permit them to penetrate the mud or clay at the bottom of the well while the barbs in like manner may be embedded in the body to be removed when the body is in the nature of a wooden block, pole, or bucket.

The invention also contemplates the provision of means for retaining the sleeve in adjusted position upon the pole in order to dispose it at a greater distance from the pointed end of the latter. To this end the pole has a longitudinal slot 12 formed therethrough, and the sleeve sections are provided with upper and lower alining perforations which register with the slot and are designed to receive bolts 14, the pole being headed at one end in the usual manner and threaded at the opposite end, the last-mentioned end of each bolt carrying a nut 15 which is adapted to be tightened against the adjacent sleeve sections.

By reason of the adjustable disposition of the sleeve it is possible to set the latter sufficiently far above the pointed end of the pole to render such end operative, or, in other words, to enable the pole point to be forced into a body engaged by the arms.

The modified form of sleeve shown in Fig. 3 likewise comprises a pair of sections 16 each of which has its pointed upper end 17 bent outwardly away from the pole, the lower edge of said ends being sharpened so as to form a blade. This sleeve is used for the purpose of chopping or breaking up the clay or mud at the bottom of the well prior to the removal of the rubbish therefrom by means of the sleeve 10 described. The sleeve sections 16 are likewise adjustably secured to the pole by means of a bolt and slot construction similar to that already described.

While the sleeve, in each instance, is formed of two entirely separate sections, it is to be

understood that such construction is not essential, as the sleeve may be provided with only a single slot which extends therethrough from end to end. The term "split sleeve" is
5 therefore intended to cover either construction.

What is claimed is:—

1. In a grapple, the combination with a pole, of a sleeve carried by the pole, said
10 sleeve being provided with a pair of oppositely-disposed spring arms extending below the lower end of the pole and having their free ends inclined outwardly, away from each other, said arms being formed integral with
15 the sleeve.

2. In a grapple, the combination, with a pole having a pointed lower end, of a sleeve slidably mounted upon the pole and provided with a pair of oppositely-disposed depending
20 arms extending below said pointed end, each arm having a barb formed on its inner face at the lower end thereof, and means for retaining the sleeve in adjusted position with respect to the pointed end of the pole.

25 3. In a grapple, the combination, with a pole, of a sleeve carried by the pole adjacent its inner end, said sleeve being provided with a pair of oppositely-disposed depending spring arms having their lower ends inclined
30 outwardly, each arm having a separate inwardly extending barb formed on its inner face above the inclined end thereof.

4. The combination, in a grapple, of a pole, a sectional sleeve carried by the pole adjacent
35 its lower end, each sleeve section being provided with a spring arm extending downwardly from the lower edge thereof and having its lower end inclined outwardly.

5. In a grapple, the combination, with a
40 pole, of a split spring sleeve carried by the pole adjacent its lower end and provided with a pair of diametrically opposite depending arms, each provided on its inner face adjacent its lower end with an upwardly inclined
45 barb, said arms being formed integral with said sleeve.

6. In a grapple, the combination with a pole having a pointed lower end, of a sleeve carried by the pole and provided with a pair of diametrically opposite spring arms extending
50 below said pointed pole end, each arm having an upwardly extending barb formed on its inner face, said sleeve being adjustable bodily upon the pole to move said barbs towards and from the pointed end of the pole. 55

7. In a grapple, the combination with a pole having a pointed lower end, of a split spring sleeve carried by the pole and adjustable thereon bodily towards and from said
60 pointed end, a pair of diametrically opposite members formed integral with said sleeve, and means for retaining said sleeve in adjusted position upon the pole.

8. In a grapple, the combination with a pole, having a pointed end and provided with
65 a longitudinal slot adjacent said end, of a sleeve carried by said pole and having alining perforations formed therethrough, said sleeve including a pair of oppositely disposed depending spring arms having their lower ends
70 bent outwardly away from each other, and bolts extending through said perforations and said slot to retain the sleeve in adjusted position with respect to the pointed end of the pole. 75

9. In a grapple, the combination, with a pole, having a pointed end and provided with a longitudinal slot adjacent said end, of a split spring sleeve carried by said pole, each
80 section of the sleeve being perforated and provided with a depending arm having its lower end bent outwardly, and bolts extending through the perforations in said sections and through said slot, for retaining the sleeve
85 in adjusted position with respect to the pointed end of the pole.

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

EDWARD D. COOGAN.

Witnesses:

T. E. RILEY,
C. M. WATSON.