

No. 744,583.

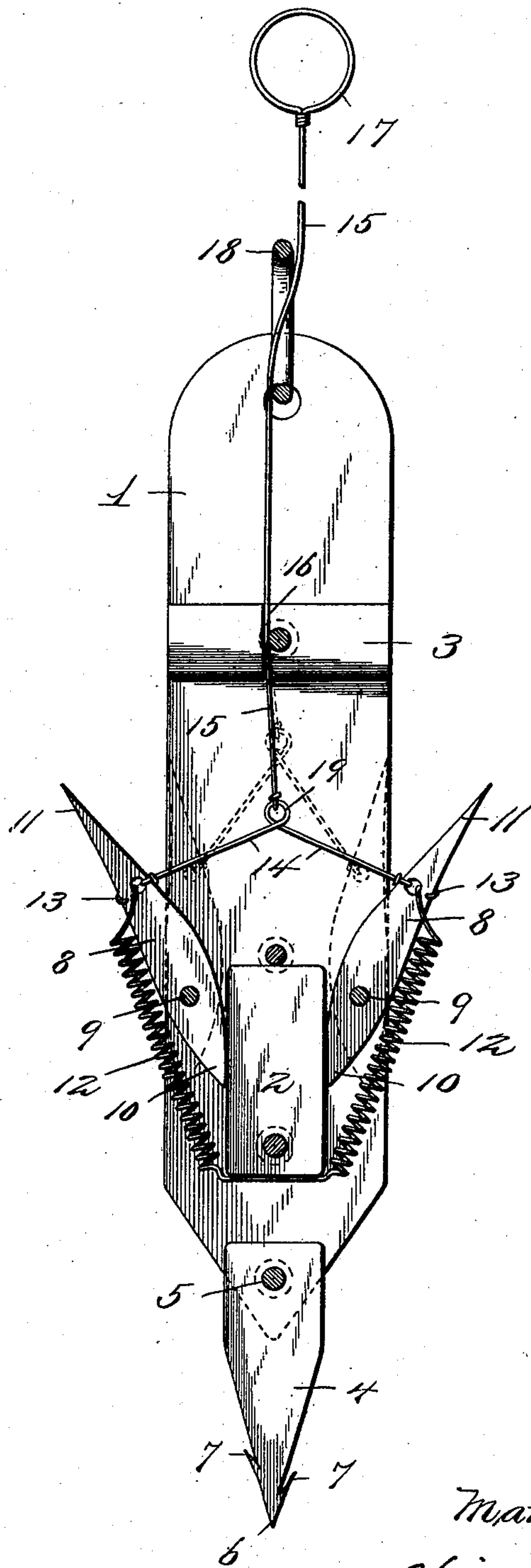
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M. S. MEADERS.

GRAPPLE.

APPLICATION FILED MAY 6, 1903.

NO MODEL.



Witnesses

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## UNITED STATES PATENT OFFICE.

MARTIN S. MEADERS, OF SOLGOHACHIA, ARKANSAS.

## GRAPPLE.

SPECIFICATION forming part of Letters Patent No. 744,583, dated November 17, 1903.

Application filed May 6, 1903. Serial No. 155,938. (No model.)

*To all whom it may concern:*

Be it known that I, MARTIN S. MEADERS, a citizen of the United States, residing at Solgo-hachia, in the county of Conway and State of  
5 Arkansas, have invented new and useful Improvements in Grapples, of which the following is a specification.

This invention relates to grapples, and has for its object to provide a simple, inexpensive,  
10 and effective grappling implement especially adapted for use in removing from wells and other deep places wooden or metal buckets and other articles which may have become accidentally disconnected from the usual  
15 hoisting-rope and lost. The construction of the grapple is such that it is adapted to automatically engage and obtain a firm hold upon the bucket or other article by simply dropping the grapple to the bottom of the well or  
20 other place in which the article lies. The device is also adapted to be operated by hand from the top of the well whenever necessary.

With the above and other objects in view the invention consists in the novel construction, combination, and arrangement of parts,  
25 as hereinafter fully described, illustrated, and claimed.

The accompanying drawing represents a vertical longitudinal section through a grapple constructed in accordance with the present invention, showing the spring-actuated prongs thrown out in full lines and folded in dotted lines.

The frame of the grapple comprises, essentially, a pair of sides 1, which may be formed either of wood or metal and which are held at the proper distance apart by means of a stop-block 2, located adjacent to the lower end of the side pieces, and a spacing-block or  
40 cross-cleat 3, arranged near the upper end of the frame, the side pieces being secured firmly together at suitable points by means of bolts or rivets, as shown.

At the lower end of the frame is a spear-point 4, fastened by means of a rivet or other suitable fastener 5 between the side pieces 1 and the frame, the lower extremity of said point being sharpened, as shown at 6, and provided adjacent thereto with reversely-extending beards 7, which are adapted to catch  
50 into a wooden bucket or other article when

the extremity of the point is driven into the same; as will be readily understood.

The stop 2 extends lengthwise of the frame, and upon opposite sides thereof are arranged  
55 prongs 8, pivoted at 9 between the sides of the frame, with their heel ends 10 resting against the opposite sides of the stop, as shown, said stop thereby serving to limit the inward movement of the heel ends and the  
60 outward movement of the sharpened extremities 11 of the prongs, which extremities normally project beyond and outside of the frame, as shown in the drawing. The prongs 8 are normally thrown outward by means of  
65 one or more spreader-springs 12. By preference the spring 12 is made in one piece, so as to extend through between the sides of the frame and beneath the stop-block 2, the extremities 13 of the spring being hooked  
70 through openings in the prongs or otherwise suitably connected thereto. The tension of the spring 12 is utilized to normally hold the points 11 of the prongs outward in the position shown in the drawing. At the same  
75 time the springs will yield to allow the points 11 to be moved inward to the dotted-line position, as shown in the drawing.

Near their upper ends the prongs are joined by means of a spring connection 14, the ex-  
80 tremities of which are connected with the prongs and the central portion of which has attached thereto the lower end of a prong operating or controlling wire or rope 15, which extends upward through a groove 16 in the  
85 spacing-block 3 and is provided at its upper end with a finger-loop 17, by means of which the wire or rope may be operated.

18 designates a supporting or suspending ring connected with the top of the frame, so  
90 that the device as a whole may be lowered into and removed from a well by means of an ordinary hoisting rope or cable.

In operation when the grapple is lowered into a bucket the prongs 8 spring outward  
95 and engage the opposite sides of the bucket and obtain a sufficiently firm hold thereon to enable the bucket to be hoisted to the surface of the ground. Should the bucket or other object be upside down, the barbed or bearded  
100 point 4 will penetrate the material of the bucket, and the beards 7 will obtain a firm



hold on the bucket or other object, enabling the latter to be hoisted to the surface of the ground.

Instead of forming the spring 12 in one piece  
5 separate springs may be used for each pivoted prong. The spreading of the prongs 8 is also contributed to by the spring connection 14, which tends to assume a straight position when the prong-operating wire 15 is released.  
10 The spring connection 14 may be provided with one or more coils 19 to assist in spreading the pivoted prongs. It will therefore be apparent that the invention is susceptible of changes in the form, proportion, and minor  
15 details of construction, which accordingly may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, I  
20 claim as new—

1. A grapple comprising a frame, embodying spaced sides, a stop-block arranged between the sides, pivotally-mounted prongs arranged at opposite sides of the stop-block  
25 and between the sides of the frame, one or more springs for normally urging the points of the prongs outward, and a prong-operating device for drawing the prongs inward

within the plane of the frame, substantially as described. 30

2. A grapple comprising a frame consisting of side pieces spaced apart and united, prongs pivotally mounted intermediate their ends between the side pieces, a spring for throwing the points of the prongs outward, a stop  
35 interposed between the heel ends of the prongs for limiting their outward movement and a prong-operating device for simultaneously drawing both prongs inward within the plane of the frame, substantially as described. 40

3. A grapple comprising a frame, pivotally-mounted prongs carried thereby, a spring connection interposed between the prongs for normally urging the points thereof outward beyond the plane of the frame, and an operating connection attached to the spring con-  
45 nection for drawing the points of the prongs inward within the plane of the frame, substantially as described.

In testimony whereof I affix my signature 50 in presence of two witnesses.

MARTIN S. MEADERS.

Witnesses:

G. A. SCRAGGIN,  
I. W. BIRD.