P. L. PETERSON.

GRAPPLE.

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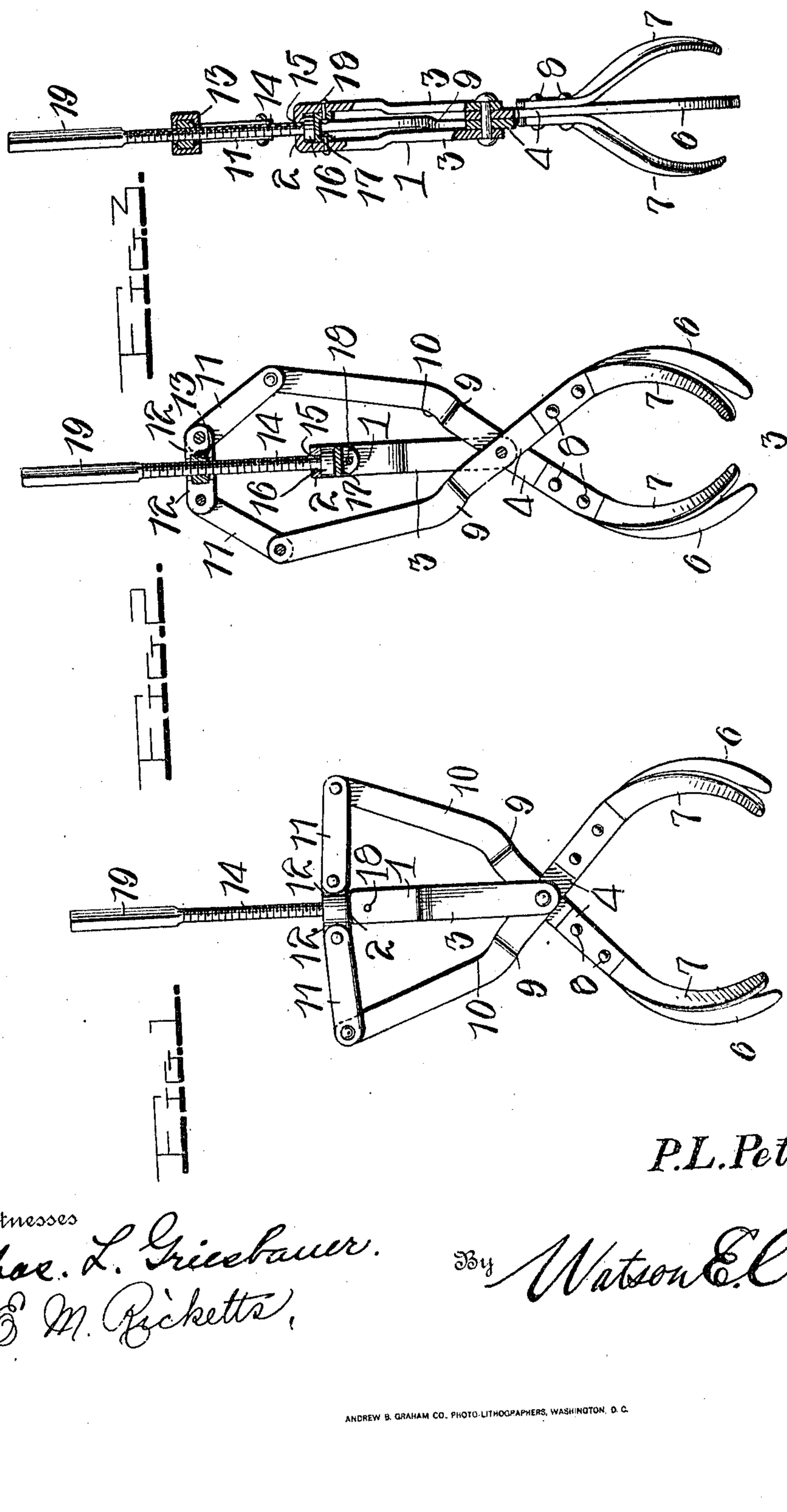
956,995.



Witnesses
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UNITED STATES PATENT OFFICE.

PETER L. PETERSON, OF KELVIN, NORTH DAKOTA.

GRAPPLE.

956,995. Specification of Letters Patent. Patented May 3, 1910.

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To all whom it may concern:

Be it known that I, PETER L. PETERSON, a citizen of the United States, residing at Kelvin, in the county of Rolette and State of North Dakota, have invented certain new and useful Improvements in Grapples, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in grapples and more particularly one especially designed for use in removing boulders, tools and other objects out of bored wells, although it may be employed for other purposes.

The object of the invention is to provide a simple and practical device of this character which will be effective in accomplishing the purpose intended.

With the above and other objects in view, the invention consists of the novel construction, combination and arrangement of parts, hereinafter fully described and claimed, and illustrated in the accompanying drawings in which:—

Figure 1 is a side elevation of my improved grapple showing it open; Fig. 2 is a vertical section of the same showing it closed; and Fig. 3 is a vertical section taken at right angles to the plane of Fig. 2.

Referring more particularly to the drawings 1 denotes the body member of the grapple which is formed from a heavy metal strap by bending the same into substantially U-shape to provide a horizontal top portion 2 and depending side portions 3, the lower ends of which are inwardly offset but disposed in spaced relation to receive between them two crossed levers 4. The latter are fulcrumed intermediate their ends at their points of intersection by a transverse bolt or pivot 5 which passes through the lower extremities of the side portions or arms 3 of the body. The lower ends of the levers 4 are curved longitudinally and carry grappling prongs as shown, or other grappling devices. As illustrated, the lower extremities of the lever 4 form central prongs 6 arranged between side prongs 7 formed by two metal bars curved longitudinally and tapered, and having their converging upper ends secured on opposite sides of the levers 4 by transverse bolts or fastenings 8. While this is the preferred manner of constructing and arranging the grappling prongs it will be understood that I do not wish to be limited to this construction. The upper ends of the levers 4 are offset laterally in opposite directions, as shown at 9, and also curved outwardly in opposite directions as shown at 10, whereby the upper extremities of said levers will be disposed in spaced diverging relation but in the same transverse vertical plane. Said upper extremities of the levers are connected by pairs of links 11 to diametrically opposed lugs 12 carried by a screw sleeve or nut 13, which latter is adapted to travel on a screw shaft 14 which also serves as a hanger for the device. The lower extremity of the screw shaft 14 rotates in a central opening 15 in the top 2 of the body 1 and it has a swivel connection with said body by providing on said lower extremity of the shaft a circular head 16 which is retained in the top of the U-shaped body 1 by an inverted cross plate 17 screwed by bolts or rivets 18, as clearly shown in Fig. 3. The upper extremity of the screw shaft 14 is square or of polygonal shape as shown at 19 to receive a suitably shaped socket member on a rod or shaft (not illustrated) adapted to be used for lowering the tool into a well and then rotating the shaft 14 to cause the jaws of the grapple levers to close upon a boulder, tool or other object in the well.

In operation, the shaft 14 is screwed to bring the nut 13 close to the body 1 so that the links 11 throw the upper ends of the levers 4 outwardly and simultaneously spread the prongs or jaws of the device apart. When the parts are in this position, see Fig. 1, the tool is lowered into the well and when it reaches the bottom or engages the object to be lifted the shaft 14 is screwed to move the nut 13 upwardly on the shaft and thereby cause the jaws or prongs to grip the object.

Having thus described the invention, what is claimed is:

1. A device of the character described comprising a body, a pair of gripping levers fulcrumed thereon, a screw having a swivel connection with the body, a traveling nut on the screw, and operative connections between the nut and levers.

2. A device of the character described comprising a body of inverted U-shape, a pair of crossed levers fulcrumed interme-

diate their ends in the lower portion of the body and having gripping jaws or prongs at their lower extremities, an upright screw having its lower end swiveled in the top of the body, a traveling nut on said screw, and links connecting said nut to the upper extremities of the levers.

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

PETER L. PETERSON.

Witnesses:
WESLEY FASSETT,
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