

No. 848,231.

PATENTED MAR. 26, 1907.

J. K. FLYNN.
GRAPPLE.

APPLICATION FILED NOV. 27, 1906.

Fig. 1.

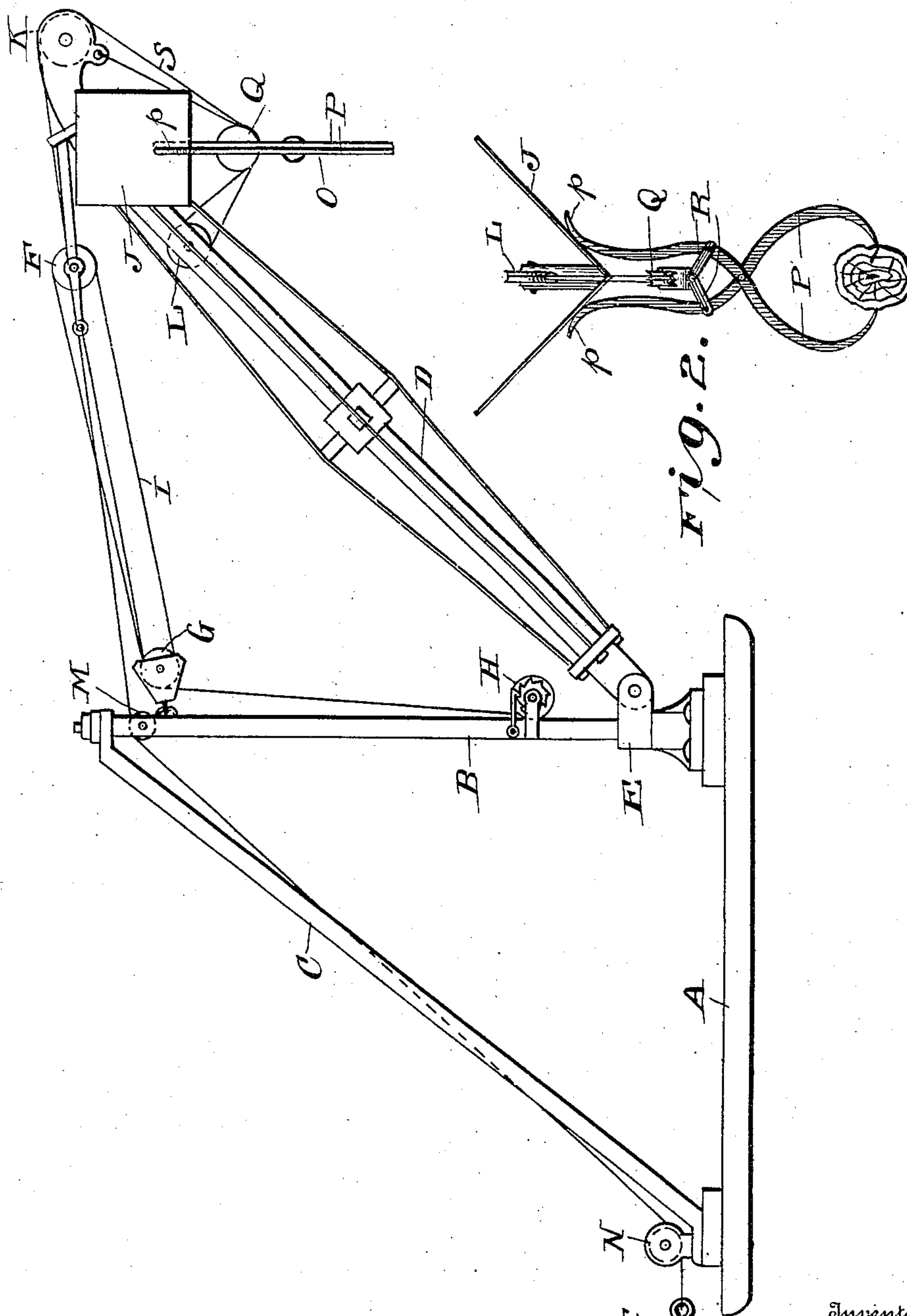


Fig. 2.

Witnesses

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JOHN K. FLYNN, OF DULUTH, MINNESOTA.

GRAPPLE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN K. FLYNN, a citizen of the United States, residing at Duluth, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Grapples, of which the following is a specification.

My invention relates to grapples employed in clearing land of stumps, &c., and is constructed in relation with a derrick having on the end of its boom a V-shaped structure that engages the arms of the grapple and by spreading them releases the jaws of the grapple from the stump, so that it can be dropped in any place desired, usually in a fire built on the land being cleared.

My invention will be described in detail hereinafter and illustrated in the accompanying drawings, in which—

Figure 1 is a side view of derrick, showing my improvements secured thereto; and Fig. 2, a detail view of the grapple and means for dumping it.

In the drawings similar reference characters indicate corresponding parts in both views.

A indicates a platform, which may be, as shown, a sled, or, if preferred, may be mounted on wheels for easier transportation, or may be permanently secured in position, though for the purpose of clearing land of stumps, &c., it is necessary to construct the platform so that it may be transported from place to place.

B indicates a mast, secured to platform A, having its upper end braced by means of beam C, secured to platform A.

D represents the boom, revolubly mounted on mast B by means of sleeve E.

F indicates a block secured to the end of boom D, G a block secured to mast B, and H a drum secured to the mast, while I indicates a cable geared to blocks F and G and secured on drum H, the purpose of said construction being to regulate the angle of the boom D.

J indicates a V-shaped plate secured to the end of boom D.

K indicates a pulley journaled in the end of boom D; L, a pulley journaled on the boom below V-shaped plate J; M, a pulley jour-

naled in the upper end of mast B, and N a pulley journaled at the base of brace-beam C.

O represents the grapple, consisting of two arms P, pivotally secured together intermediate of their ends and having their upper ends curved outwardly, as shown at *p*.

Q represents a double pulley and block, connected by means of links R with arms P.

S represents a cable secured to the end of boom D, then passed around one of the pulleys in block Q, then around pulley L, back around the other pulley in block Q, and then around pulleys K, M, and N, and provided with a hook T or other draft appliance.

By pulling on hook T it will be understood that the grapple O will be raised and that when the curved ends *p* of the grapple-arms P engage the V-shaped plate J the arms P are forced apart, so that the grapple is released from its load.

It will be understood that by properly operating the device stumps may be lifted from their position in a field and automatically dumped on a fire to destroy them or into a wagon to haul them away.

Having thus described my invention, what I claim is—

In combination with a derrick having a swinging boom, a V-shaped plate secured to the free end of the boom, a pulley journaled in the end of the boom, a pulley journaled intermediate the ends of the boom, a grapple having arms shaped to engage the V-shaped plate aforesaid, links pivotally secured to said arms, a double block secured to said links, and a cable having one end secured to the outer end of the boom, then around one of the pulleys in the block, then around the pulley journaled intermediate the ends of the boom, then around the other pulley in the block, then around the pulley on the end of the boom, and the free end of the cable provided with a draft appliance, substantially as shown and described.

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

JOHN K. FLYNN.

Witnesses:

JOHN B. ARNOLD,
B. F. ANDERSON.