

No. 868,120.

PATENTED OCT. 15, 1907.

J. C. PETERSON.  
GRAPPLING HOOK.

APPLICATION FILED FEB. 18, 1907.

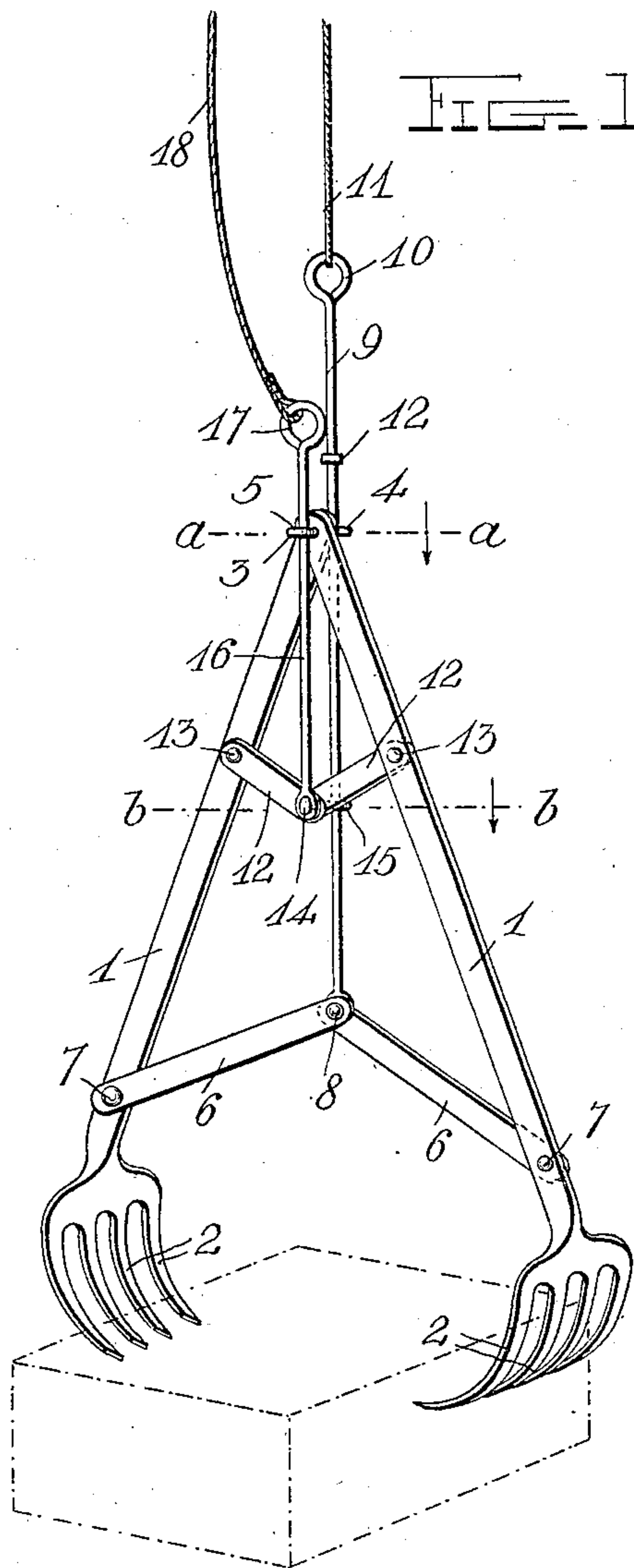


FIG. 2

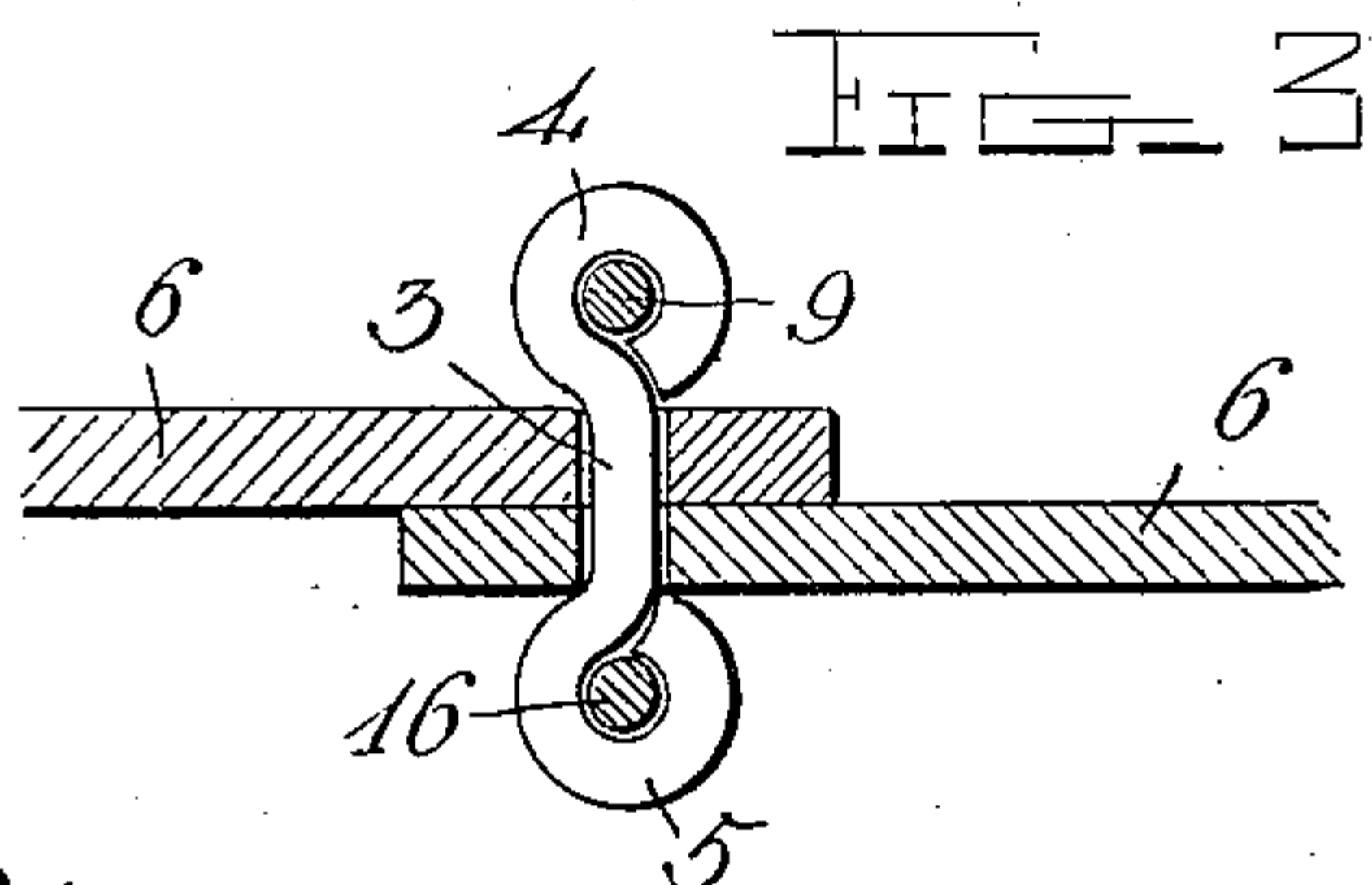
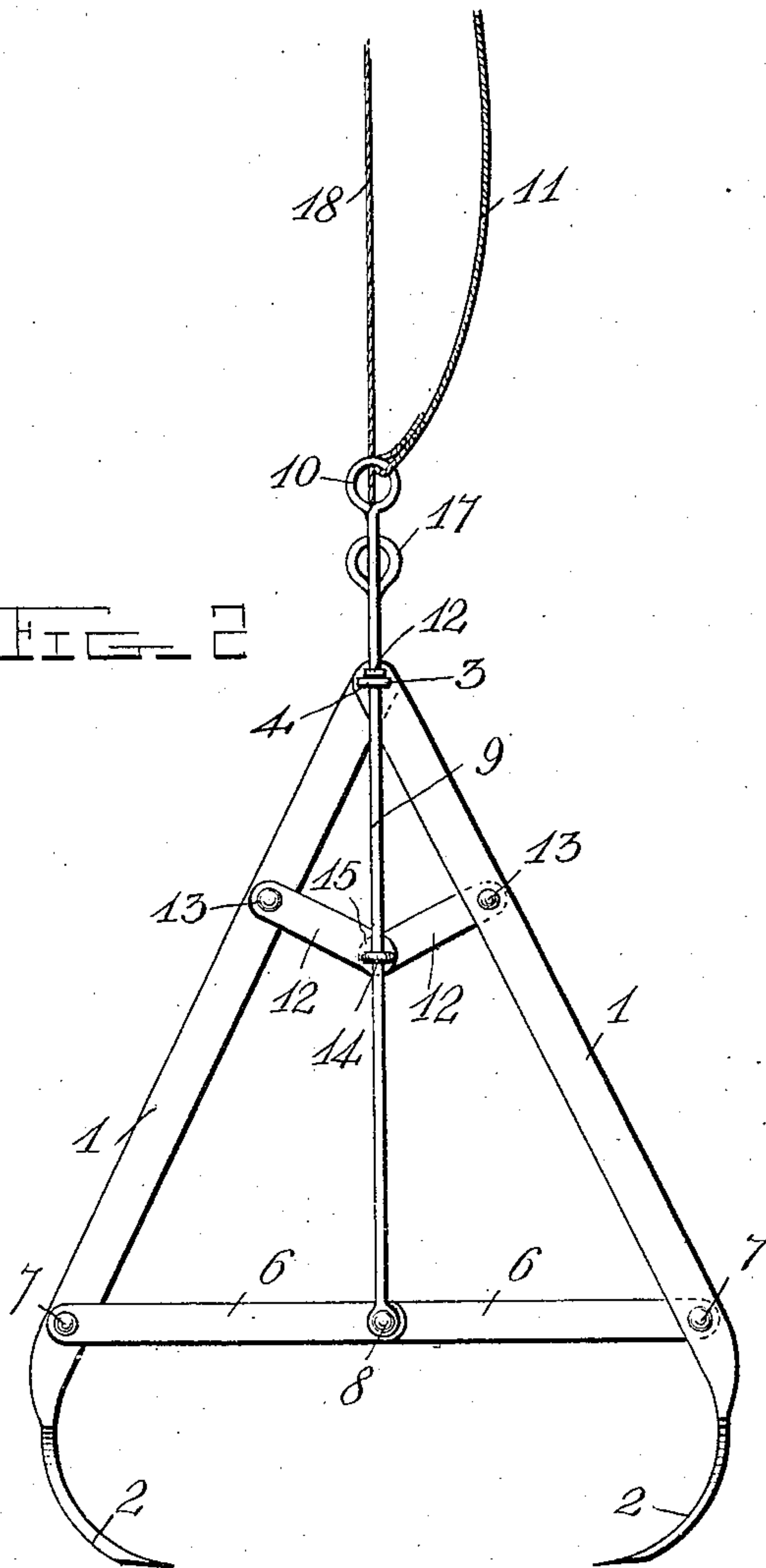


FIG. 3

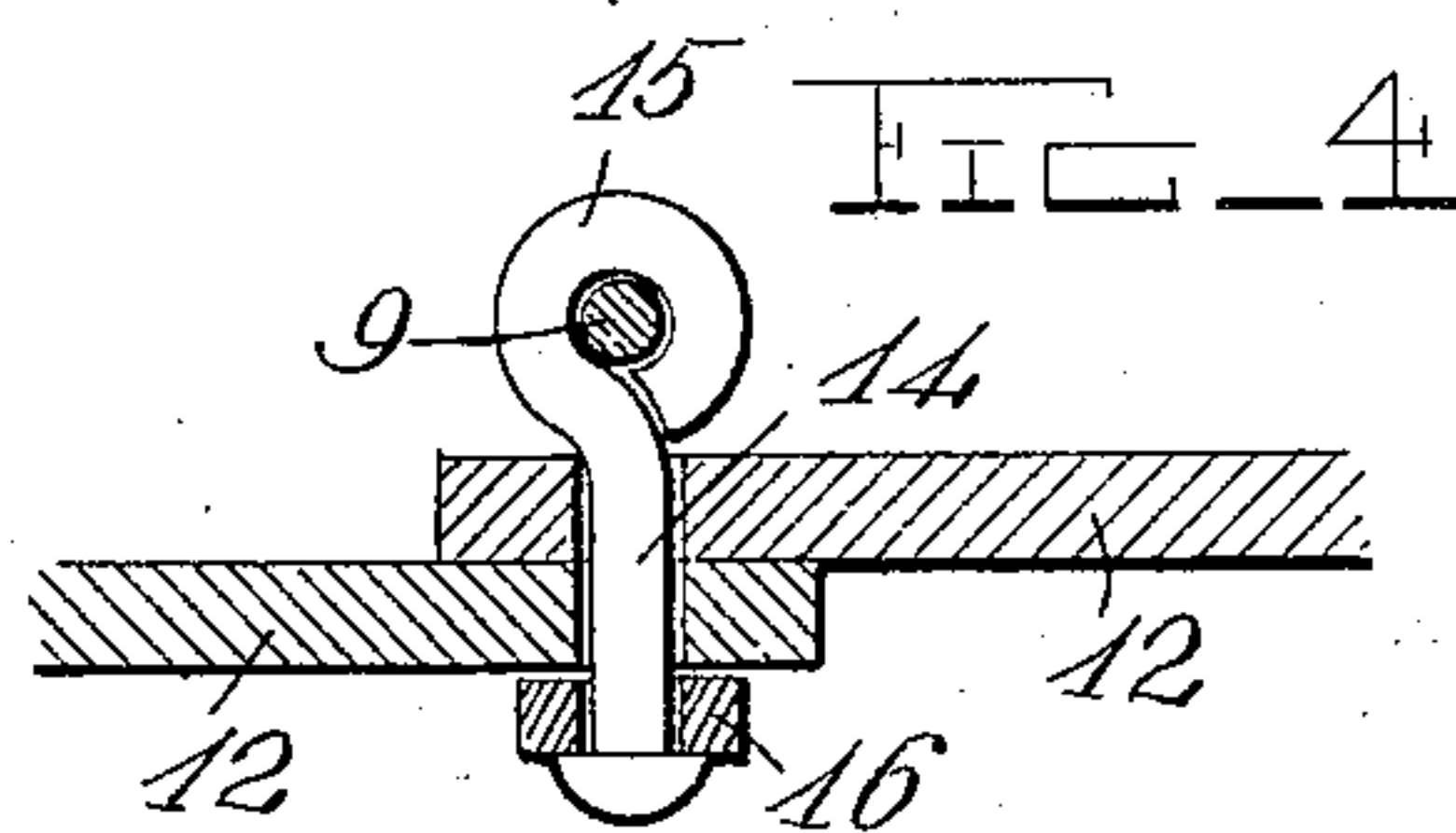


FIG. 4

Witnesses  
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# UNITED STATES PATENT OFFICE.

JACOB C. PETERSON, OF BESSEMER, ALABAMA.

## GRAPPLING-HOOK.

No. 868,120.

Specification of Letters Patent.

Patented Oct. 15, 1907.

Application filed February 18, 1907. Serial No. 358,054.

*To all whom it may concern:*

Be it known that I, JACOB C. PETERSON, a citizen of the United States, residing at Bessemer, in the county of Jefferson and State of Alabama, have invented certain new and useful Improvements in Grappling-Hooks; and I do 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.

My invention relates to improvements in grappling hooks, which operate automatically to open, close upon and to release an object, adapted for use in recovering submerged articles, and also adapted for use in connection with a crane or other suitable hoisting device for removing snags and other obstructions from rivers and other streams; for clearing railroad and other wrecks; for handling articles in foundries, machine shops and manufacturing plants; for lifting and moving stone in quarries; in loading and unloading bales of cotton, and in short, for raising and lowering articles of any kind and under a great variety of conditions.

The said invention consists in the construction, combination and arrangement of devices hereinafter described and claimed.

In the accompanying drawings,—Figure 1 is a perspective view of a grappling hook embodying my improvements, showing the same engaged with an object to raise the same; Fig. 2 is a side elevation of my improved grappling hook showing the same in disengaged position; Fig. 3 is a detail sectional view taken on the plane indicated by the line *a—a* of Fig. 1; Fig. 4 is a similar view taken on the plane indicated by the line *b—b* of Fig. 1.

My improved grappling hook has a pair of jaws 1, pivotally connected together at their upper ends. The said jaws are here shown as provided with a plurality of prongs 2 at their lower ends, but each jaw may be constructed with one or any number of prongs at its lower end, and I do not desire to limit myself in this particular. The upper ends of the grappling jaws are pivotally connected together by a bolt 3, which is provided with eyes 4 and 5 at its opposite ends. At a suitable distance from their lower ends, the said grappling jaws are connected together by a pair of toggle links 6, said toggle links being pivoted to the jaws by bolts 7 and being pivotally connected together at their inner ends by a bolt 8. A hoisting and jaw-closing rod 9 is slidable vertical in the eye 4 of the bolt 3, has its lower end pivotally connected to the toggle links 6 at the point where their inner ends are

pivotally connected together, is provided at its upper end with an eye 10 for the adjustment of a hoisting cord or cable 11, and is provided with a stop projection 12, which when the said rod moves downwardly engages the said eye 4 of the bolt 3 and coacts therewith to prevent the link 6 from moving downwardly below a plane intersecting their pivots 7. The said grappling jaws are also connected together by a pair of releasing and lowering toggle links 12, which have their outer ends pivotally connected at a point above the links 6 to the said jaws 1 by bolts 13 and have their inner ends pivotally connected together by bolt 14, which has an eye 15 at one end, through which the hoisting rod 8 passes.

A lowering and jaw-opening rod 16 passes through and operates in the eye 5 of the bolt 3, has its lower end pivotally connected to the links 12 by the bolt 14 and is provided at its upper end with an eye 17 to which is attached a lowering and jaw-opening cable 18.

In operation the grappling hook must be lowered by the cable 18, which will cause the weight of the grappling hook to be sustained by the rod 16 and toggle links 12, and hence said toggle links will cause the jaws 1 to open. When the grappling hook is in position to grasp the article to be raised, it must be hoisted by the cable 11 and the cable 18 and allowed to slacken, thus throwing the weight of the grappling hook onto the rod 9 and toggle links 6, with the result that the said rod will cause said toggle links to close said jaws on the object, and cause the latter to be raised with the grappling hook. The heavier the article with which the grappling hook is engaged, the more firmly will the jaws thereof engage said article, as will be understood.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention, as defined by the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters-Patent, is:—

1. A grappling hook comprising a pair of jaws pivotally connected together at their upper ends, a pair of jaw closing and hoisting toggle links, having their inner ends pivotally connected together and their outer ends pivotally connected to said jaws, hoisting means attached to said links, a pair of lowering and jaw opening toggle links above the first-mentioned links, having their inner ends pivotally connected together and their outer ends pivotally connected to the jaws, and lowering means attached to the said lowering and jaw opening toggle links.

2. A grappling hook, comprising a pair of grappling jaws, a bolt pivotally connecting them together at their

upper ends, and having guide eyes at their opposite ends,  
a pair of hoisting and jaw-closing toggle links connecting  
said jaws, a rod connected to said links and operating in  
one of the eyes of said bolt, said rod having a stop device  
5 to limit the downward movement thereof and of said links,  
a pair of lowering and jaw-opening toggle links connecting  
said jaws, a bolt pivotally connecting said last mentioned  
links together and having an eye through which the said  
rod operates, and a lowering and jaw-opening rod pivotally

connected to the last-mentioned links and operating in the 10  
other eye of the first mentioned bolt, substantially as de-  
scribed.

In testimony whereof I have hereunto set my hand in  
presence of two subscribing witnesses.

JACOB C. PETERSON.

Witnesses:

R. E. EVANS,  
W. A. REED.