

E. Harter.

Grappling Hook.

N^o 98,259.

Patented Dec. 28, 1869

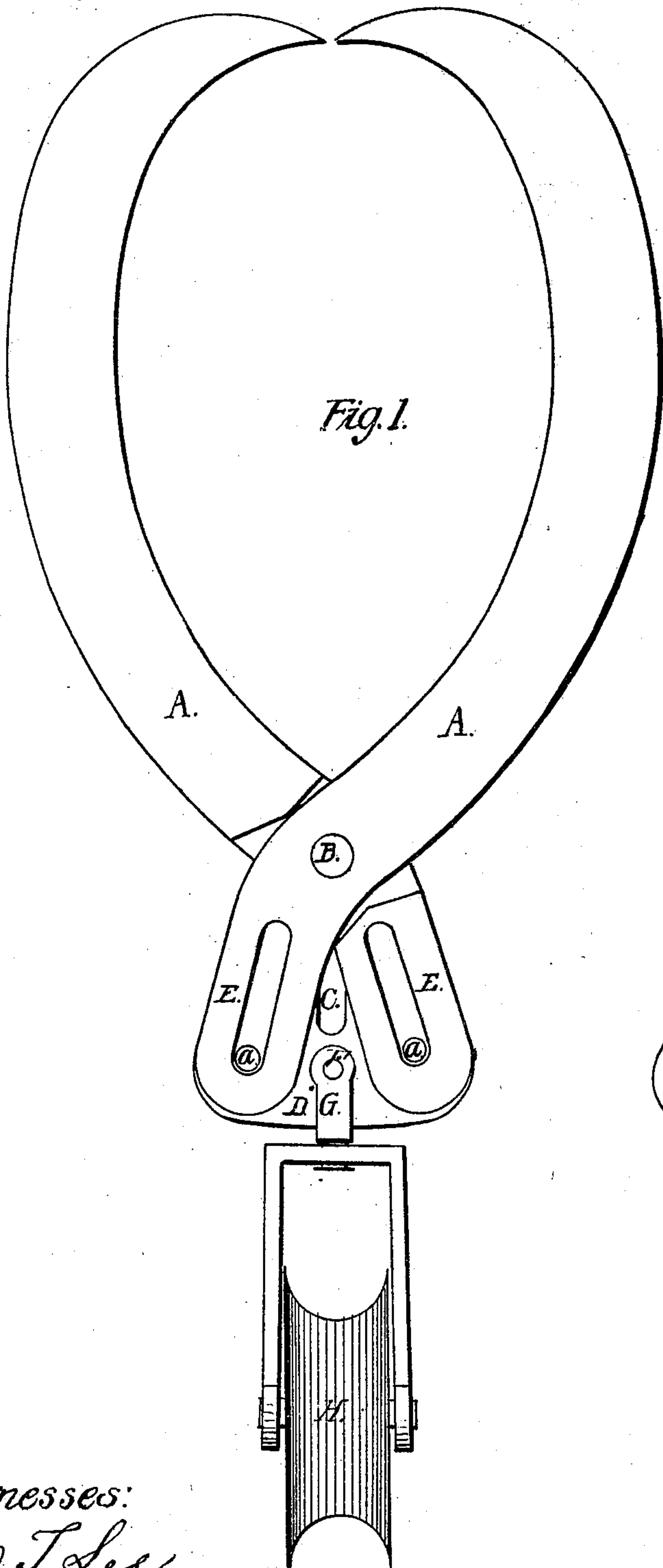
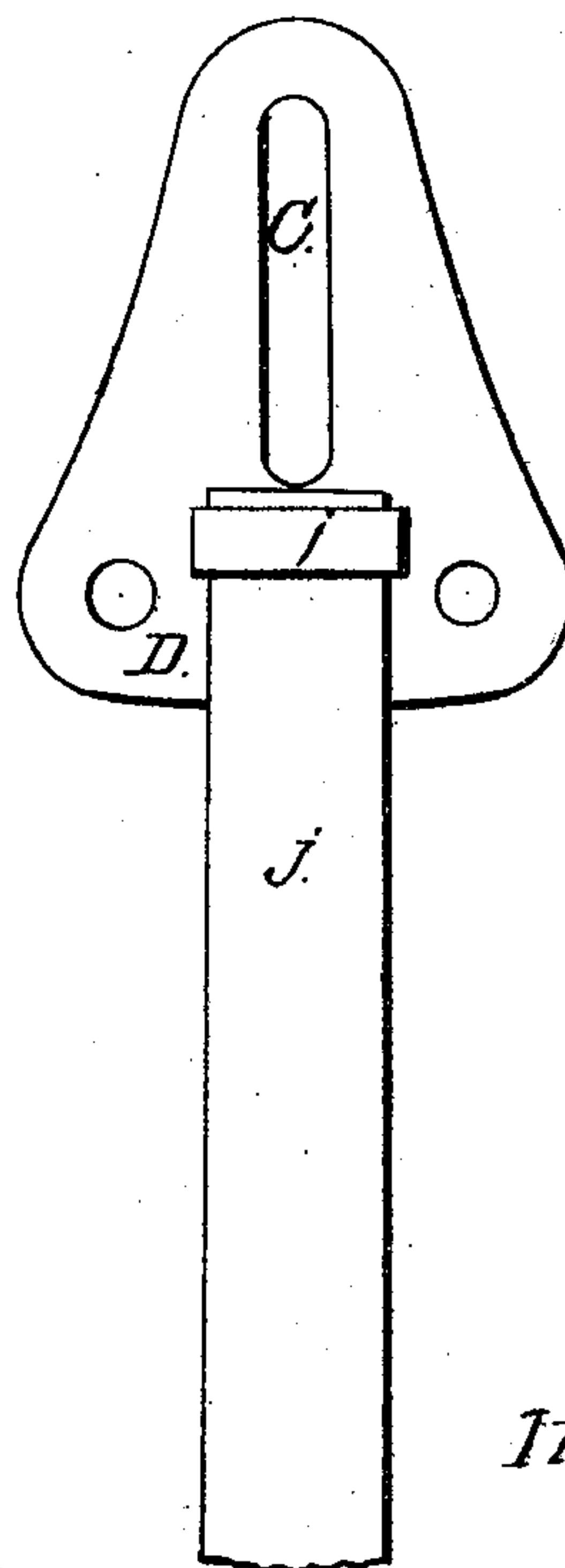


Fig. 2.



Witnesses:

C. T. Lee

M. J. F. Smith

Inventor:

Edam Harter

United States Patent Office.

ELAM HARTER, OF DOWAGIAC, MICHIGAN.

Letters Patent No. 98,259, dated December 28, 1869.

IMPROVED GRAPPLING-HOOK.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ELAM HARTER, of Dowagiac, in the county of Cass, and State of Michigan, have invented a new and improved combined "Grappling-Hook and Hoisting-Pulley;" and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side view, with one of the plates removed, and

Figure 2 is a detached section.

The nature of my invention consists in so arranging a combined "grappling-hook and hoisting-pulley," that it may be easily attached to the upper timbers of a barn or other buildings, for the purpose of elevating hay, or other substances, and may be as easily detached, when desired.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the accompanying drawings—

A A represent the grappling-hooks, which are halved and pivoted together at B.

The ends of said pivot project at each side, and work in the slots *c c*.

The shanks E E are also slotted, to receive the pins *a a*.

The two plates D D, with the pivot B and pins *a a*, form a yoke, to which is pivoted, by means of the bolt F, the swivel-attachment G, carrying the hoisting-pulley H.

One of the plates D D is provided with a ring, as

seen at *i*, for the purpose of attaching a pole, as seen at *j*, in fig. 2.

The object of this pole is to enable the operator (if the pole be sufficiently long) to reach any desired point, to attach the hooks, without the use of a ladder.

It will be seen that if the hooks A A are held in a vertical position, with their points upward, they will fall apart of their own gravity, allowing the yoke to slide up on the shanks E E, guided by the pivot B, but when either of the hooks A A engages with the timber, to which the device is to be attached, sufficiently to suspend its weight, the pole may be withdrawn, when the gravity of the yoke and attachment will cause the hooks to grapple with a force proportionate to the load suspended, caused by the oblique position of the slots in the shanks E E, as they relate to the line of motion given to the yoke.

It will also be seen that the hooks can be as easily taken down, when desired, by replacing the pole in the ring *i*, and sliding the yoke up, as at first described.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

The swivel G, pulley H, and yoke D, carrying the ring I, with the hooks A A, having the slots E E, all constructed, combined, and arranged, as herein shown and specified:

ELAM HARTER.

Witnesses:

C. T. LEE,

M. FINNICUM.