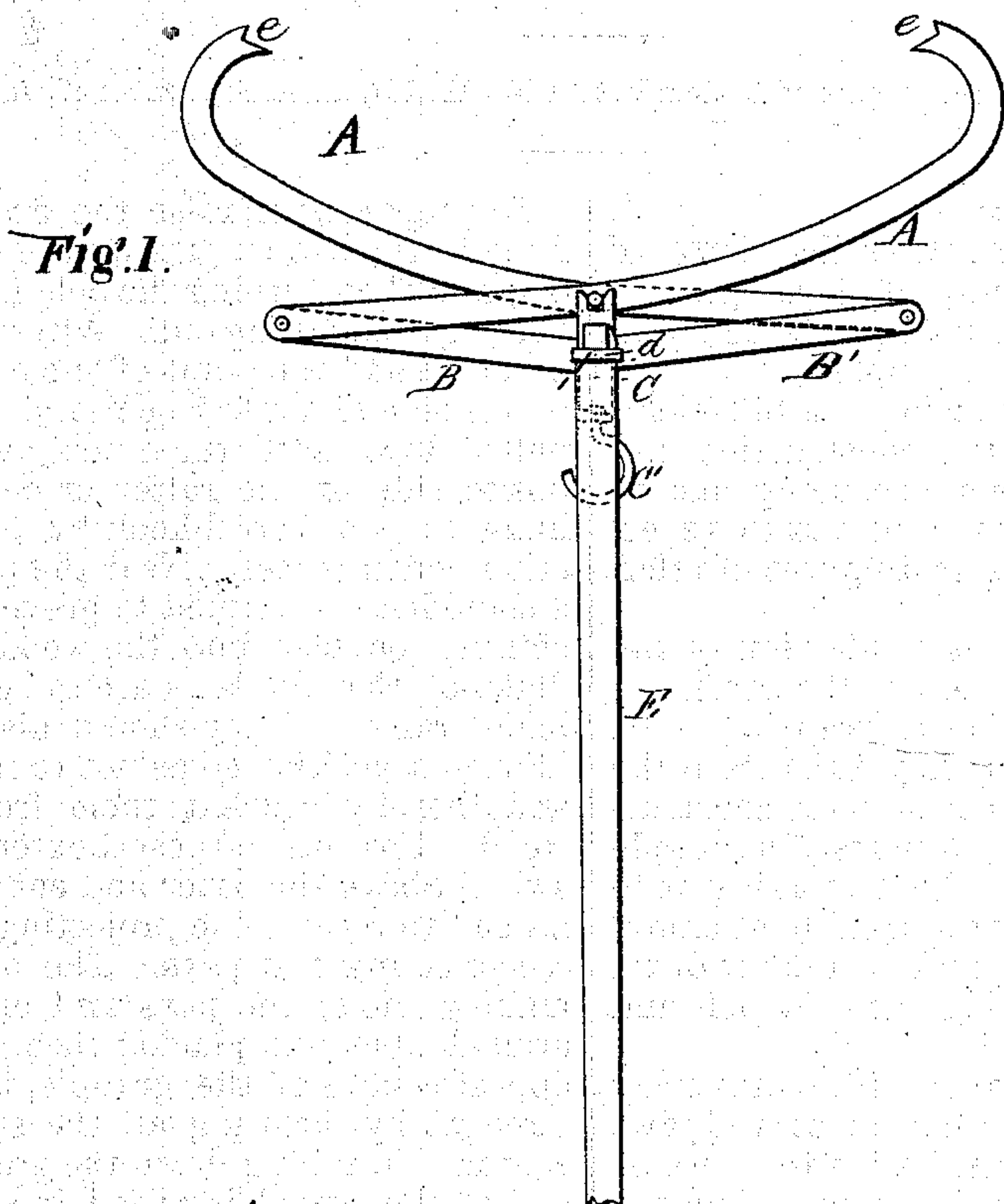
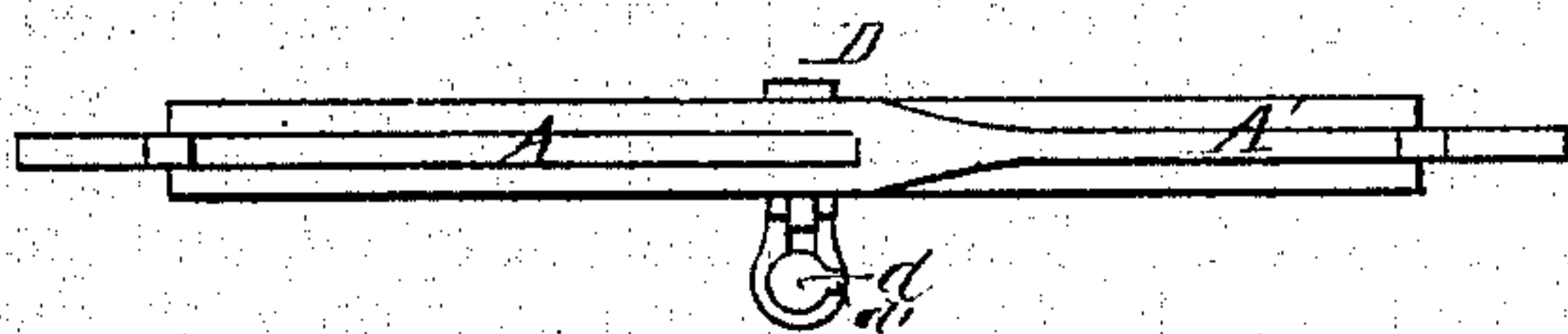


CHARLES LADOW.

## Improvement in Grapples.

No. 119,157.

Patented Sep. 19, 1871.

*Fig. 2.*

Witnesses

E. H. Bates

J. B. Curtis

Inventor:

Chas. La Dow,  
Chipman Hosmer & Co.,  
Attys.



# UNITED STATES PATENT OFFICE.

CHARLES LA DOW, OF SOUTH GALWAY, NEW YORK.

## IMPROVEMENT IN GRAPPLES.

Specification forming part of Letters Patent No. 119,157, dated September 19, 1871.

*To all whom it may concern:*

Be it known that I, CHARLES LA DOW, of South Galway, in the county of Saratoga and State of New York, have invented a new and valuable Improvement in Grapples; 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 drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a side view of my invention. Fig. 2 is a top view of the same.

This invention has relation to grapples, to be used chiefly for suspending hay-forks from the ceilings of barns; and it consists in the construction and novel arrangement of parts of a grapple whereby the operator is enabled to adjust it to its proper position without the trouble of climbing up to the barn-ceiling, and to take it down without danger of its slipping from the pole and falling on him.

In the accompanying drawing illustrating my invention, A A' represent a pair of curved jaws pivoted together. The lower half of the jaws A' is slotted longitudinally and the jaw A placed within the slot. B B' represents a pair of toggle-arms. B is pivoted at its upper end to the lower end of the slotted jaw A' and within the slot before mentioned. B' is slotted or double, and pivoted to the lower end of jaw A, which is placed within the slot or between the two bars composing B'. The lower ends of the toggles B B' are pivoted together at their lower ends and support a swivel, C, and hook C'. The pin D, which holds the lower ends of the toggles and the swivel together, is formed with an eye, *d*, to receive the end of a pole, E, which is used to raise the grapple to the barn-ceiling. The head of said pole should properly be iron, and a shoulder should be formed to prevent it from going too far through the eye *d*. A slot is cut at one side of the eye to admit a stud, *d'*, projecting from one side of the head of the pole E.

In preparing to raise the grapple the pole is fixed in the eye by putting the stud through the slot and then turning the pole half way round to keep it from falling out. Afterward the grapple is raised and the point of one of its jaws hooked to the side of a rafter or beam. The pole is then pulled down until the other jaw catches the opposite side of the rafter or beam. The fork is hung to the swivel-hook by pulleys, ropes, or other contrivances. Near the point of each jaw a shoulder, *e*, is formed to prevent the point from sinking too deep into the wood. It will be understood that the jaws are to be kept open while being raised. They should also be firmly held in such a position so as not to fall to either side and thereby prevent them from catching the wood. For this purpose I extend one side of the swivel above the other and cut a vertical slot in its end to receive the projecting end of the pivot *a* connecting the jaws. The object in view in making one of the jaws and one of the toggle-arms double, and placing them, respectively, on opposite sides of the grapple, is to give greater strength by throwing all the strain toward the center. In taking down the grapple the notched end of the swivel is raised in such a manner as to receive the projecting end of the pivot so that the grapple will be balanced and cannot fall.

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

1. The grapple herein described, having the swivel C constructed with the slotted end to receive the pivot *a*, substantially as described.

2. In a grappling device, the pin D having the slotted eye *d*, and pole E having the stud *d'*, in combination with the jaws A A' and swivel C, as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

CHARLES LA DOW.

Witnesses:

M. McWILLIAMS,  
JOHN LA DOW.

(63.)