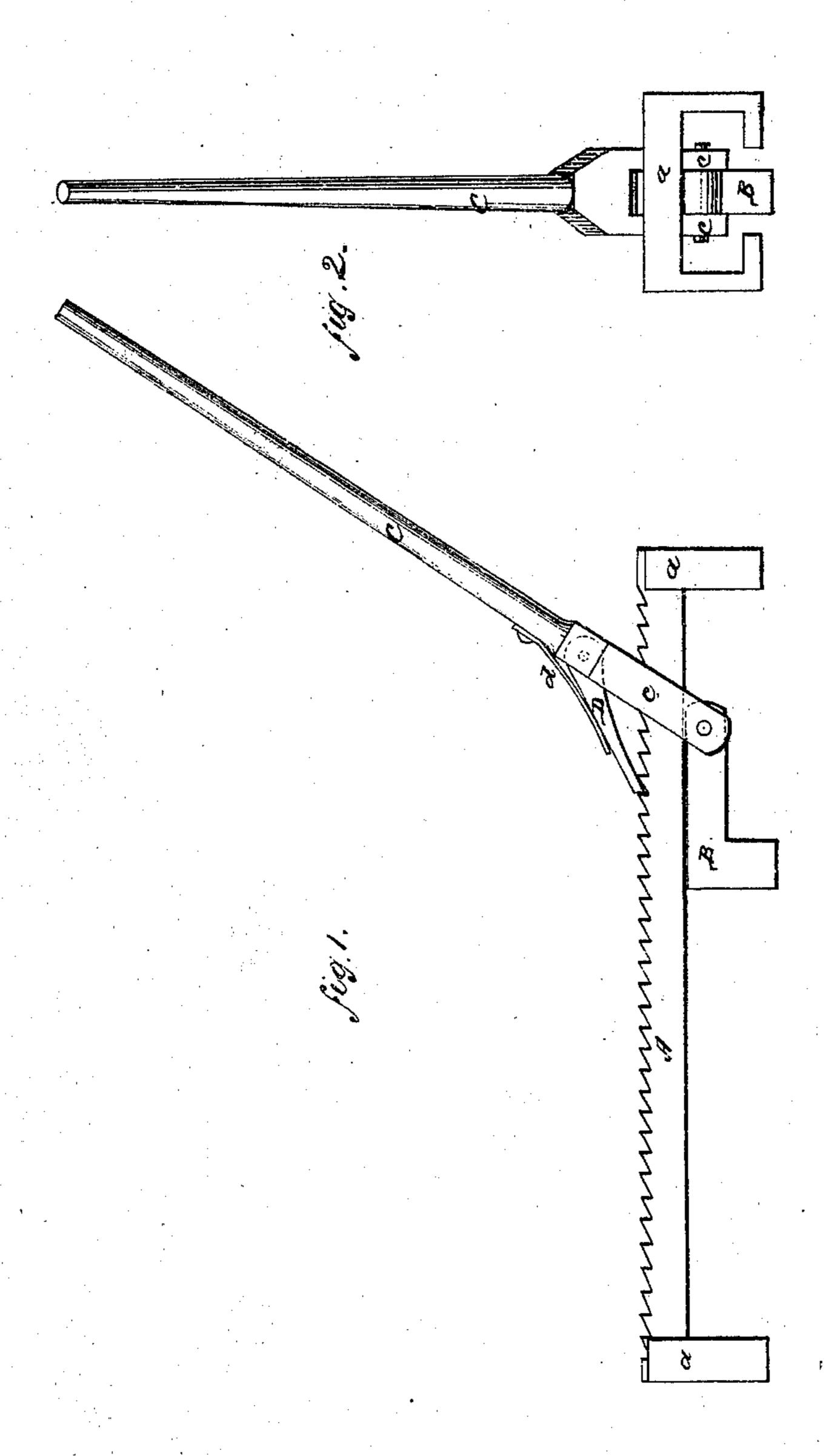
I.S. Tunt,

Listing Jack.

No. 100,390. Pater

Patented Mar. 1. 1870.



Witnesses: Fictor Hagmann Just Henreys.

## Anited States Patent Office.

## JOHN S. FUNK, OF MARYSVILLE, PENNSYLVANIA.

Letters Patent No. 100,390, dated March 1, 1870.

## IMPROVEMENT IN JACKS FOR MOVING THE CROSS-HEADS OF LOCOMOTIVES.

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

To all whom it may concern:

Re it known that I, JOHN S. FUNK, of Marysville, in the county of Perry, and State of Pennsylvania, have invented a new and improved Jack for moving the Cross-Heads of Steam-Engines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings making a part of this specification, in which—

The figure is a side elevation.

This invention has for its object to move the crossheads of locomotives or other engines when disconnected from connecting-rods, so as to get the strikingpoints of pistons and cylinder-heads.

It consists of a ratchet-bar, A, to each end of which is securely attached, at right angles to the bar, a clamping-socket, a, whose office it is to inclose the guideways in which the cross-head moves, and be fastened thereto by means of keys.

B is the hook intended to be placed upon the cross-head.

C is a lever, forked at one end so as to embrace the ratchet-bar between the ends, to the branches, c c, of which lever the hook B is jointed.

D is a pawl, pivoted at one end to the lever C at the junction of the branches c of the latter, and resting at the other end on the serrated side of the ratchet-

bar, against which the pawl is continually pressed by a spring, d.

As is evident, it is by moving the lever C back and forth that the cross-head is drawn along in the guide-ways, such drawing being effected while the lever is being raised toward the perpendicular, and the lever gaining distance along the ratchet every time is is lowered. The cross-head may be moved at every stroke from one sixty-fourth of an inch up to two inches, and the machine may be operated by a child.

To reverse the motion of the cross-head it is only necessary to remove the pin which joins the hook B and lever C together, reverse the ratchet-bar, and then replace the pin.

Having thus described my invention,

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

The combination of the ratchet-bar A, clamping-sockets a, hook B, lever C, and pawl D, either with or without the spring d, in the manner and for the purpose described.

To the above specification of my invention I have signed my hand this 18th day of January, 1870.

JOHN S. FUNK.

Witnesses:

GEO. H. VANTILBURG, CHAS. M. DICKINSON.