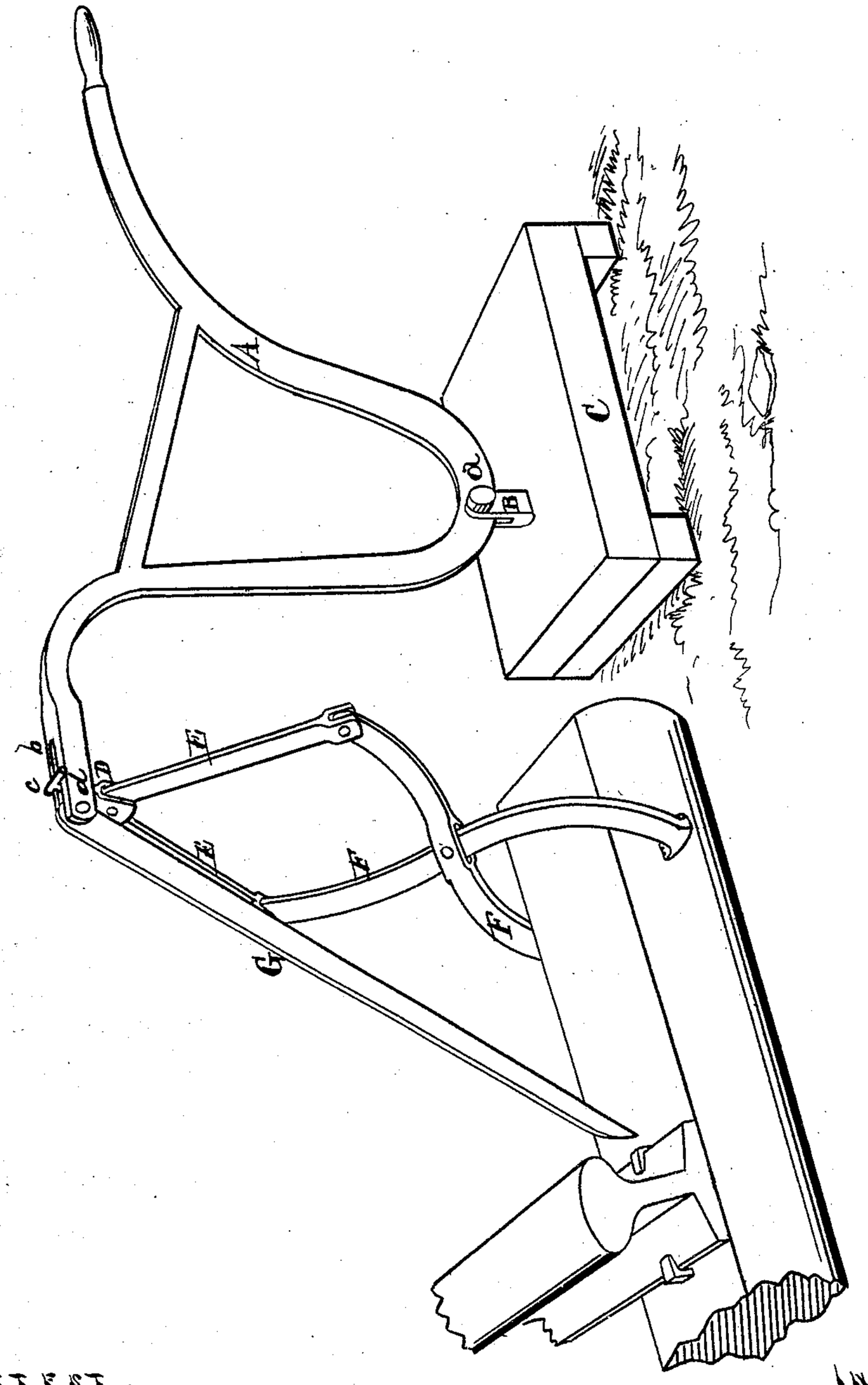
W. H. PENROSE.

Track-Lifters.

No. 147,162. Patented Feb. 3, 1874.



ATTEST.

H. F. Eberts.

H. S. Sprague

INVENTOR.

Wm H. Penrose

per attorney

Hor. S. Sprague

UNITED STATES PATENT OFFICE.

WILLIAM H. PENROSE, OF UNITED STATES ARMY.

IMPROVEMENT IN TRACK-LIFTERS.

Specification forming part of Letters Patent No. **147,162**, dated February 3, 1874; application filed July 25, 1873.

To all whom it may concern:

Be it known that I, WILLIAM HENRY PENROSE, of the United States Army, have invented a new and useful Improvement in Track-Lifters; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, and being a part of this specification, in which my invention is shown in perspective.

This invention has for its object to furnish a light and cheap device by means of which the sunken ties in a railway-track may be readily lifted and sustained in an elevated position while being tamped up; and to this end it consists in a pair of crossed grappling-levers, for grasping the tie, suspended by links at their upper ends from a swiveled clevis suspended in a slot in the end of a simple lever pivoted in a standard rising from a pedestal, which rests on the ground outside the track.

In the drawing, A represents a curved simple lever pivoted at *a* to a standard, B, mounted on a pedestal, C. The end of the lever is slotted, as at *b*, to receive a T-headed bolt, *c*, to which is swiveled a clevis, D, in whose jaws are pivoted the upper ends of two links, E, whose lower ends are pivoted to the arms of a pair of crossed levers, F, or grapnels, whose lower ends are serrated to grasp a cross-tie. G is a pawl, pivoted at *d* in the extremity of the slot of lever A, its lower end being sharpened, to engage with the surface of the cross-tie.

The operation of the device is as follows: The pedestal is placed on the embankment, just outside the end of the tie that is to be raised, and the grappling-levers engaged with the sides of said tie, with the toe of the pawl resting upon it. The lever A is then depressed at the outer end, when the tie and a section of contiguous track will easily be raised; at the same time the inner end of the lever recedes from the track, dragging the pawl with it; and, on releasing the pressure on the outer end of the lever, the toe of the pawl is immediately forced into the surface of the cross-tie, which is suspended by the levers in its elevated position from the end of lever A, whose descent is arrested by the pawl, which has now become a strut, to support the said lever A.

Where the width of the embankment is not sufficient to allow the pedestal to be placed outside the ties, the former may be placed between two ties inside the rails, the levers turned to grasp the sunken tie, and the toe of the pawl to rest upon a tie beyond the sunken one.

The bend or curve of the lever A should be strengthened by a tie-rod reaching across the open part, enabling a lighter section of iron to be used without risk of flexure.

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

The lever A, pivoted in the standard B of the pedestal C, the crossed levers F, suspended by the links E E and clevis D from the end of the lever A, and the pawl G, suspended from the end thereof, substantially as and for the purpose set forth.

WILLIAM HENRY PENROSE.

Witnesses:
H. F. EBERTS,
H. S. SPRAGUE.