

VAN C. YANTIS.

LEVER-CLAMP.

No. 188,718.

Patented March 20, 1877.

FIG. 1.

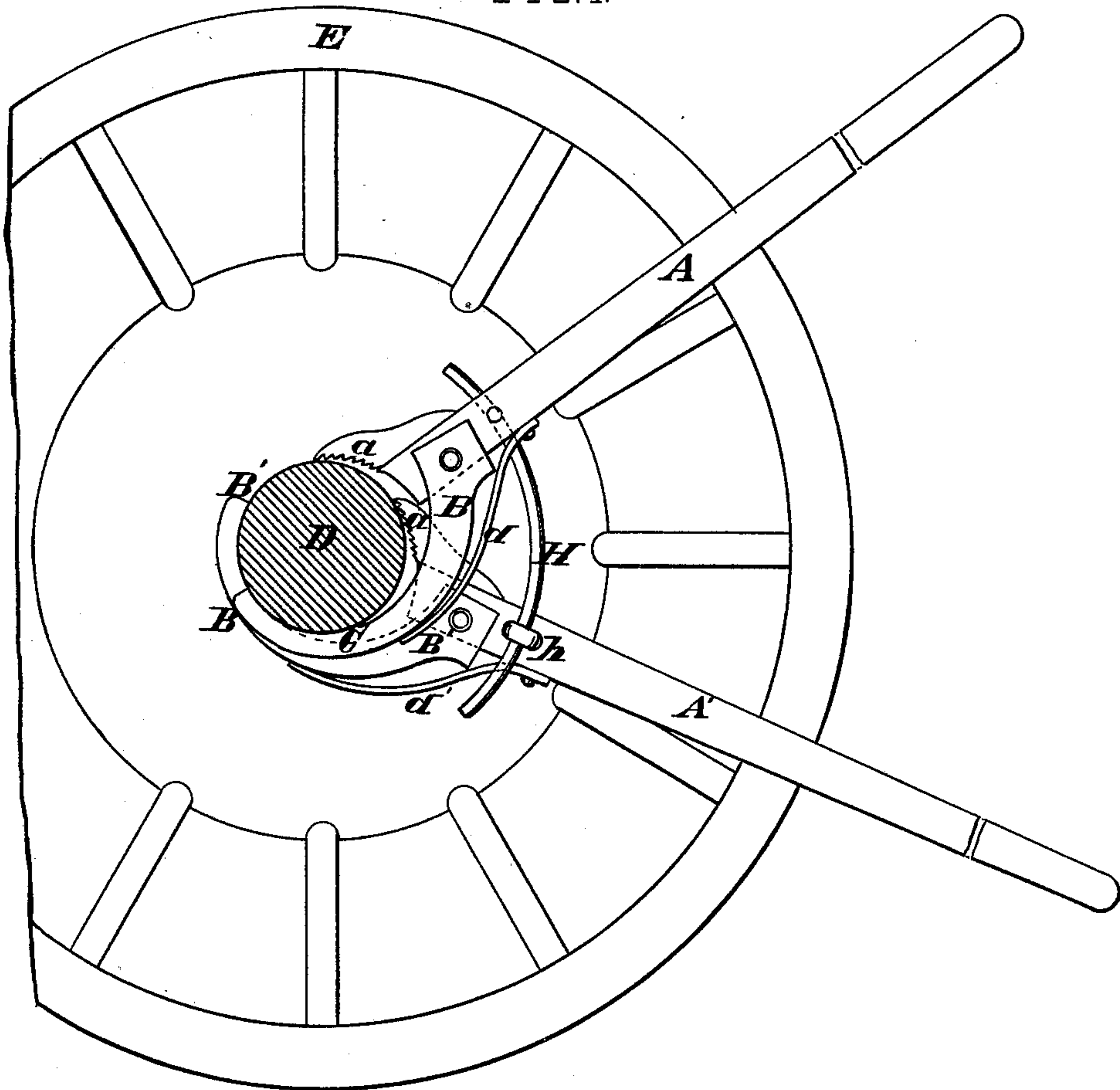
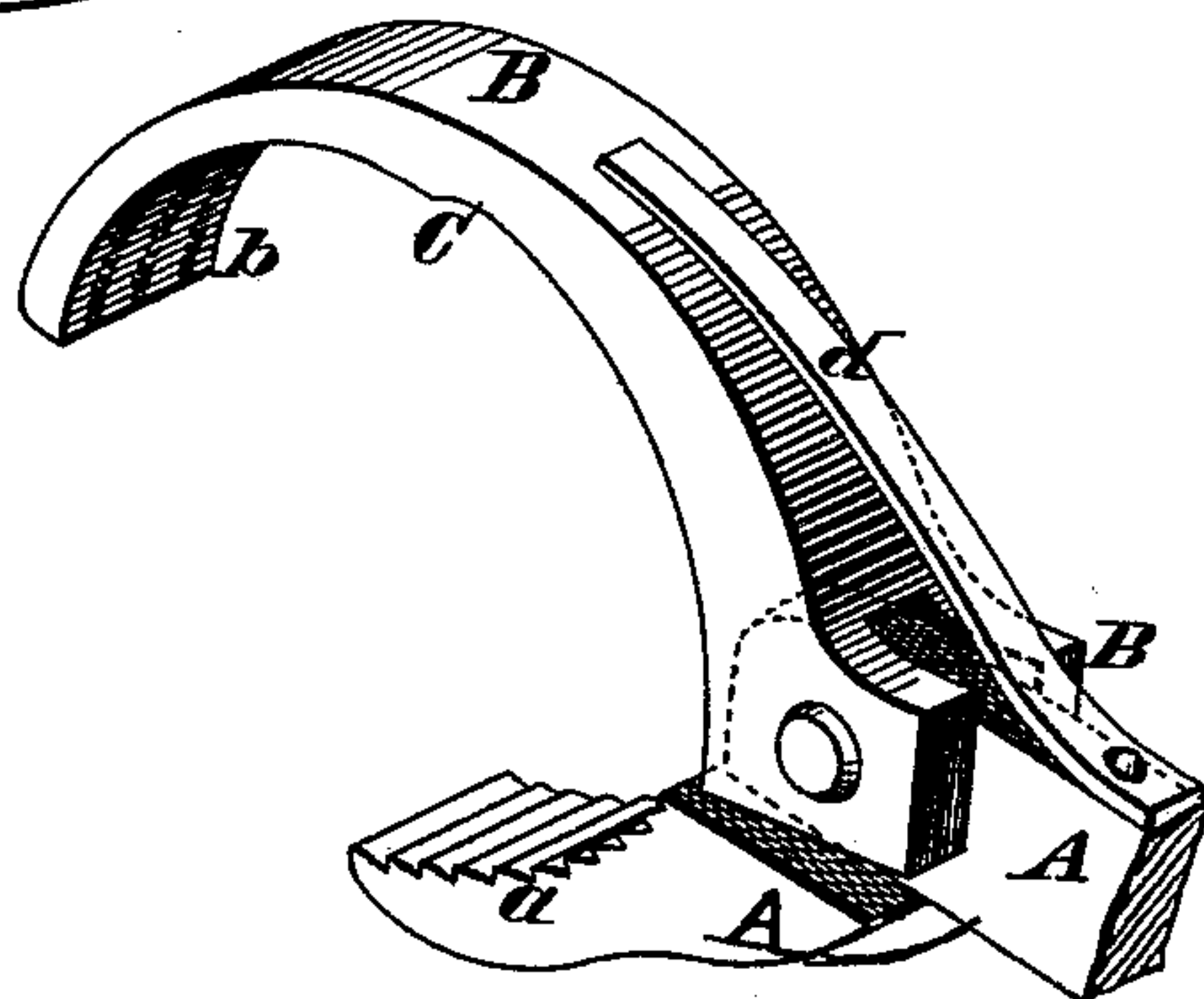


FIG. 2.



ATTEST.

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VAN COURT YANTIS, OF ROLLA, MISSOURI.

IMPROVEMENT IN LEVER-CLAMPS.

Specification forming part of Letters Patent No. 188,718, dated March 20, 1877; application filed December 26, 1876.

To all whom it may concern:

Be it known that I, V. C. YANTIS, of Rolla, in the county of Phelps and State of Missouri, have invented a new and useful Improvement in Levers and Clamps, as a device for moving railroad freight-cars into any desirable position, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to rapidly move freight-cars when they are uncoupled and may be in an undesirable situation for loading or unloading, or where any other changes in position may become necessary.

My lever and clamp is intended for compound or single action. Whenever a car must be moved up a grade, the second lever, in that case, is to be coupled by slipping its curved rod into the connecting-eye, and thus it serves the purpose of a double lever, also holding what may be gained. In most other cases but one lever and clamp will be needed.

The fixed fulcrum, or short portion on the head of the lever, has a roughened radial curvature equal to the diameter of a four-inch axle. The outer portion of the clamp is correspondingly curved and roughened, and should be well faced with steel. Rearward from C to the shoulder of the clamp-joint the curvature is greater, to prevent other than the roughened parts from touching the axle.

The general radius of the clamping parts, should be a curve that will include the largest number of axles. Clamps with greater or lesser curves should also be provided to meet varying sizes of axles. The roughened part on the longer limb of the clamp is intended to have its conforming arc about one-half of its length.

The curved coupling-rod may be best made of steel.

The spring is attached to the rear part of the fulcrum-piece by a screw, and is solely intended to keep the clamp close up to its point of seizure as the lever is operated back to renew its hold. When the clamp is worked over-hand—as when the car approaches—the spring is needless. When used under-hand, or when the car is receding from the operator, without the spring the clamp would fall away from the axle.

If made of steel, the whole may be quite light in weight.

To operate my lever-clamp, I usually take an under or lifting hold, the longer limb or jaw of the clamp or wrench being underneath the axle.

The value of the compounded form of the levers is not manifest on a grade inclining with the direction of car removal; but when it is necessary to force the car against a counter-slope, the united levers are requisite.

When used for compound action, the levers are coupled on the bar H; their movement can then be but one way. One lever should be held in each hand, and the hands most advantageously used when in front of the slightly-inclined body, the levers being thus held close together and worked with successional gripe. If the seizure of the clamp is good, each lift gives a gain, and must hold that gain until the other lever takes the strain by its hold and lift, and when thus the lifting is continued the car is steadily forced onward. A lift of one foot on the hand end of the lever impels the car forward four and one-half inches. The lifts can be repeated rapidly or moderately. The certainty of the gripe, and consequent movement of the car, depend upon the active and positive co-operation of the spring *d'* in holding the longer jaw close to the axle ready for each lift, which causes the jaws to seize hold of the axle.

The perspective view, Fig. 2 and Fig. 1 of the accompanying drawing, show the levers A A', roughened face of fulcrum *a a*, with axle-arcs B B', pivoted clamps *d d'*, corresponding roughened radius *b b'* on outer part of arcs B B', and relative position of clamps when used together. D is the axle of wheel E. H is a curved coupling-bar with guide-eye *h*.

I claim as my invention—

The clamps with fixed and varied radii, roughened on the contact part, the spring, the curved rod, and the coupling-eye, combined with the lever-bars, as and for the purpose herein described.

VAN COURT YANTIS.

Witnesses:

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