

No Model.)

L. CARRIER.
THRASHING MACHINE TOOTH.

No. 252,426.

Patented Jan. 17, 1882.

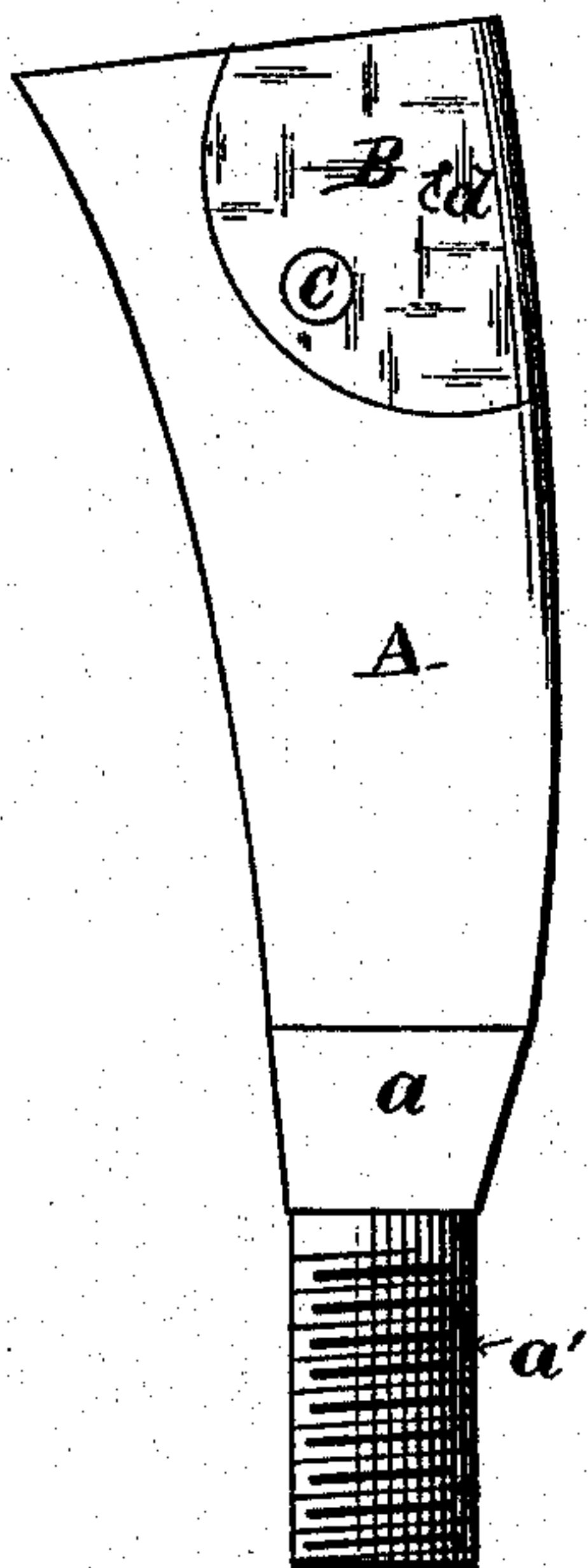


FIG. 1.

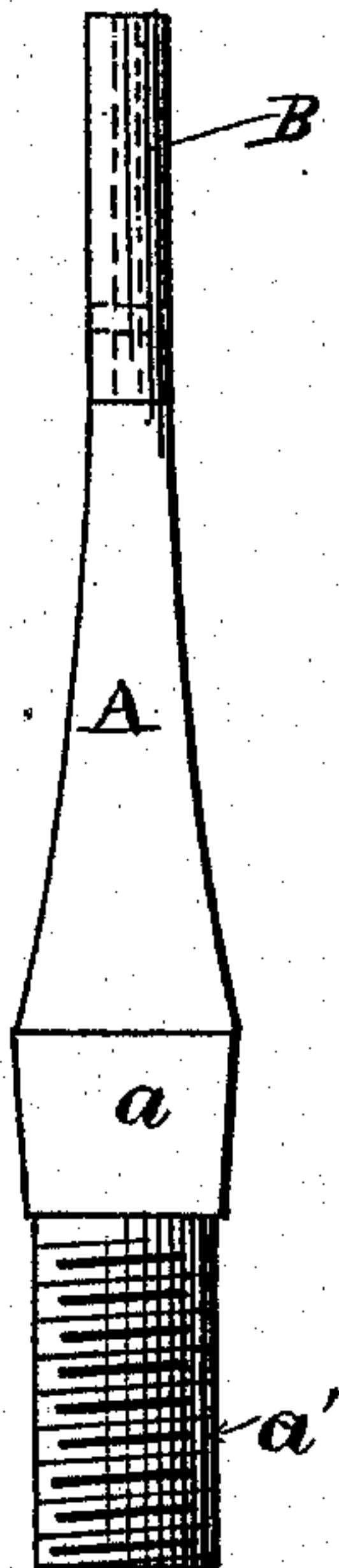


FIG. 2.

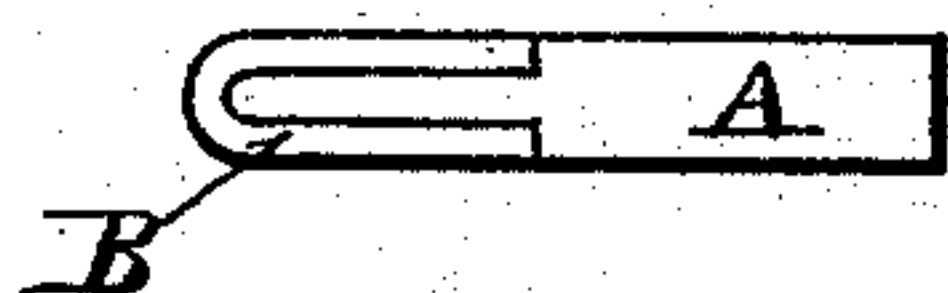


FIG. 3.

WITNESSES.

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LUCIUS CARRIER, OF PROVIDENCE, RHODE ISLAND.

THRASHING-MACHINE TOOTH.

SPECIFICATION forming part of Letters Patent No. 252,426, dated January 17, 1882.

Application filed June 13, 1881. (No model.)

To all whom it may concern:

Be it known that I, LUCIUS CARRIER, of the city and county of Providence, and State of Rhode Island, have invented a new and useful Improvement in Thrashing-Machine Teeth; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to an improvement in the teeth or beaters projecting both from the cylinders of thrashing-machines and from the abutments or concaves.

Figure 1 is a side view of one of my improved thrashing-machine teeth, showing a sheet of steel secured to the end of the tooth. Fig. 2 is a front view of the same tooth, and Fig. 3 is an end view of the same, showing the bent sheet-steel wearing-piece.

Thrashing-machine cylinders are run at a very high speed. The teeth on the cylinders, as also the fixed teeth, are subjected to a large amount of strain by the rapid succession of blows. To resist these blows the teeth have to be made of very tough iron, and their construction must be such as will insure them against breakage. Instead of resting them on the cylinder by a shoulder, they are inserted into tapering holes, so as to present the greatest thickness of metal on the periphery of the cylinder, from which point the thickness diminishes, while the depth or breadth of the tooth increases toward the end. At the outer end of the tooth and on the forward face of the same all the blows are exerted and all the wear of the tooth comes. As this part passes only through the other teeth, and having provided for the rigidity of the tooth to withstand the blows and retain its position, it becomes necessary to protect the teeth against the wearing action of the blows on the face of the teeth.

In the drawings, A is the thrashing-machine tooth, provided with the taper a , which enters the socket, and the screw a' , by which it is secured.

B is the sheet-steel re-enforcement, consisting of a piece of bent sheet-steel, so as to present the double end on the forward edge of the tooth and to resist all wear caused by the blows. The re-enforcement B is shown as forming a section of a circle the center of which is at d , and when so made it is secured by the

rivet c ; but it may have any other form and be secured by welding to the tooth. In either case the steel re-enforcement can be hardened so as to resist all the wear caused by the blows, while the tooth itself, being of a softer and tougher material, will resist all the bending or breaking strains.

In practice iron teeth resist the strain caused by the blows, but are liable to soon wear on the ends and become useless. Steel teeth present the opposite difficulty. When the ends are hardened they will resist wear for a long time; but no matter how carefully hardened the change in the structure caused by hardening will extend toward the base of the tooth, and such teeth are very liable to break and cause injury to the machine.

With my improved tooth, consisting of tough fibrous iron re-enforced by a doubled steel plate, all these difficulties are avoided. The steel plate may be hardened without affecting the iron tooth, and a tooth combining the maximum of resistance with the maximum of hardness at the wearing end is the result.

By making the re-enforcement of circular form, the center of the circle being on the side of the tooth, and swaging or forming the tooth so as to receive the same, the steel re-enforcement will be easily retained, as the centrifugal force, as well as the force of the blows, is taken up by the shoulder on the tooth.

I am aware that a fibrous iron thrashing-machine tooth has had its front edge faced with steel, and I do not claim such a tooth broadly.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The thrashing-machine tooth A, made of tough iron, and having its forward upper portion provided with the re-enforce B, consisting of a plate of steel folded to fit over the upper portion of the front edge and along both sides of the upper front portion of the tooth, said re-enforce being secured in place by a rivet passing through both its side portions and the portion of the tooth between them, substantially as described.

In witness whereof I have hereunto set my hand.

LUCIUS CARRIER.

Witnesses:

WILLIAM L. COOP,
H. J. MILLER.