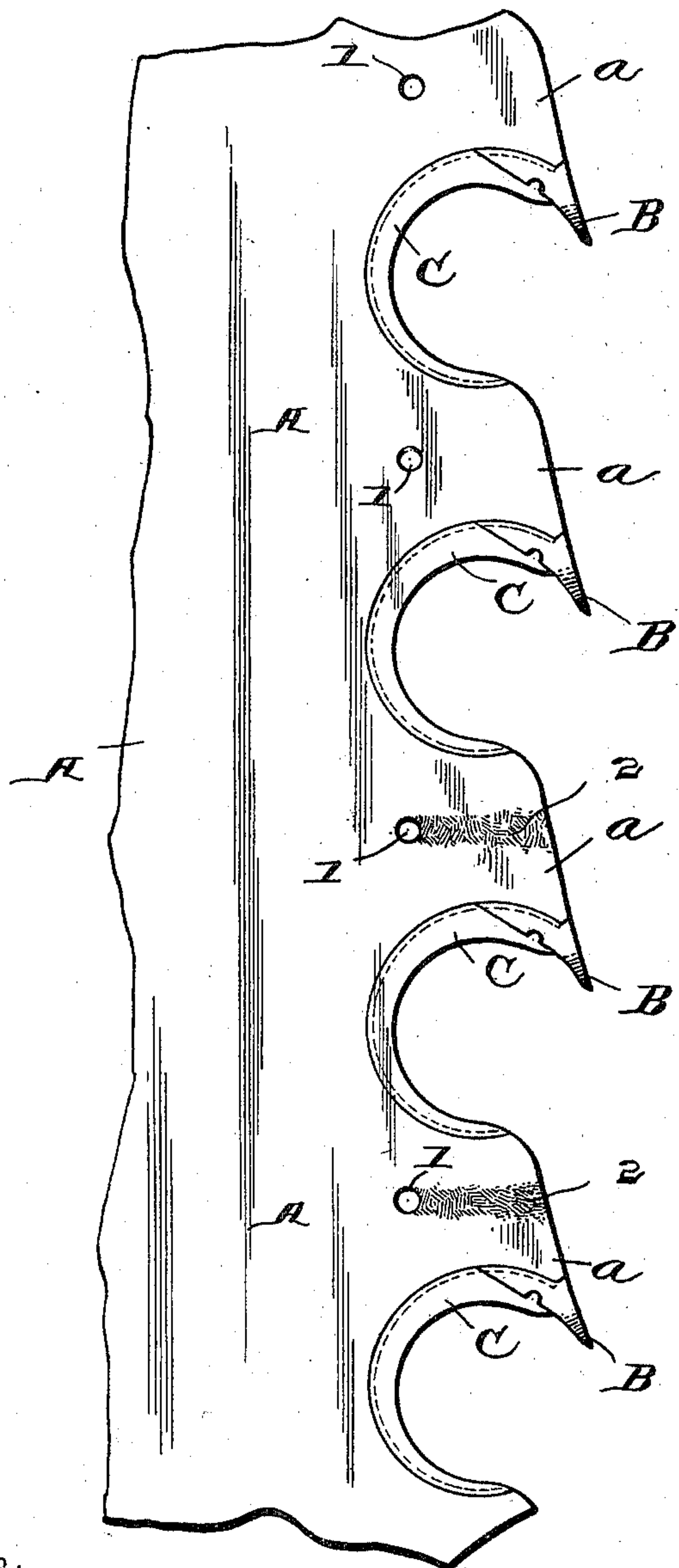


(No Model.)

E. C. ATKINS.
INSERTED TOOTH SAW.

No. 584,840.

Patented June 22, 1897.



WITNESSES:

H. S. Neely.
J. A. Walsh.

INVENTOR

Elias C. Atkins,
BY
Chester Bradford,
ATTORNEY.

UNITED STATES PATENT OFFICE.

ELIAS C. ATKINS, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO THE E. C. ATKINS & COMPANY, OF SAME PLACE.

INSERTED-TOOTH SAW.

SPECIFICATION forming part of Letters Patent No. 584,840, dated June 22, 1897.

Application filed March 16, 1897. Serial No. 627,803. (No model.)

To all whom it may concern:

Be it known that I, ELIAS C. ATKINS, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Inserted-Tooth Saws, of which the following is a specification.

It is frequently the case in inserted-tooth saws that the tooth-holders become loosened by wear. This is especially true of band-saws, which in passing over the pulleys are bent back and forth and in which, consequently, there is a wear upon the joints between the saw-blade and the teeth and tooth-holders to which other varieties of saws are not subject. The saw-blades, especially of this variety of saws, must be made of low temper and comparatively soft in order to endure the continual bending consequent upon the passage over the pulleys, while of course the teeth themselves must be made hard and finely tempered in order that they may cut properly, and the tooth-holders must also be made hard in order to have the required stiffness within the proper limits of size. Heretofore when the tooth-holders have become loosened by the wear above spoken of or otherwise it has been customary to hammer or "peen" them somewhat, thus increasing their size and causing them to fit more tightly into the recesses in the saw-blade. On account of their hardness and brittleness, however, this hammering has frequently resulted in breaking and destroying said tooth-holders, and in any case it tends to impair their spring and holding qualities. To hammer the adjacent portions of the saw-blade as such saws are ordinarily constructed results in changing the "tension" or strain of the blade generally, and consequently has not been permissible.

The object of my invention is to produce a saw in which the comparatively soft and tough metal of the saw-blade may be the part subjected to the hammering and at the

same time avoid changing the tension of the saw-blade proper.

To this end I form holes 1 at a point near the lower ends of the projecting portions *a* of the saw-blade A, between the recesses therein, for the teeth B and tooth-holders C, substantially as indicated in the accompanying drawing, which illustrates a fragment of a saw embodying my present invention. The hammering is then applied between said holes and the edge, as indicated by the shading at the point 2. As will be readily understood, the strain on the metal in hammering terminates when it reaches the holes, and the tension of the blade proper beyond said holes is not appreciably affected, as I have demonstrated by practical tests.

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

1. The improvement in the art of adjusting the tooth-holder sockets by expanding the metal in the space between the teeth of a saw, comprising the peening of such metal after first providing an aperture or apertures at the point or line beyond which the effect of such peening ought not to extend, thus confining such effect to the toothed portion of the edge of the saw-blade, substantially as and for the purposes set forth.

2. A saw having recesses for inserting teeth, and projections between said saw-tooth spaces, which projections are expanded by peening to properly adjust said saw-tooth spaces, the effect of such peening being confined to such projections by properly-placed apertures.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 11th day of March, A. D. 1897.

ELIAS C. ATKINS. [L. S.]

Witnesses:

CHESTER BRADFORD.
JAMES A. WALSH.