(No Model.)

E. VIEWEGH.

SAW.

No. 551,458. Patented Dec. 17, 1895.

Fig. 1.

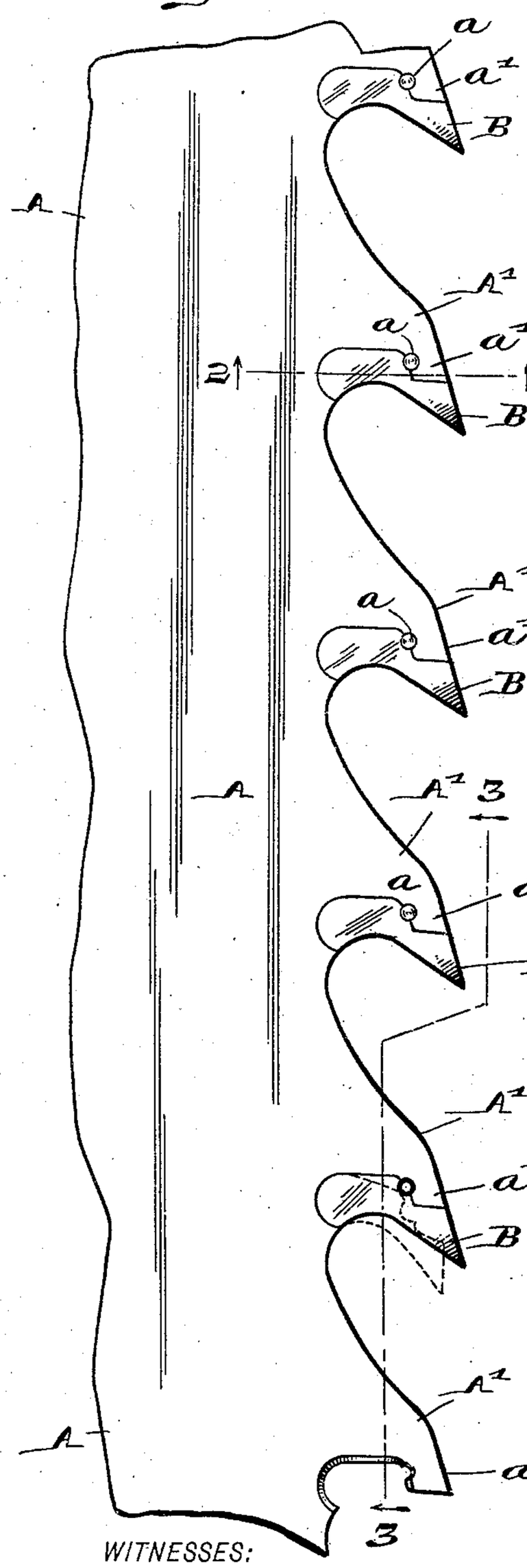

Fig. 2.

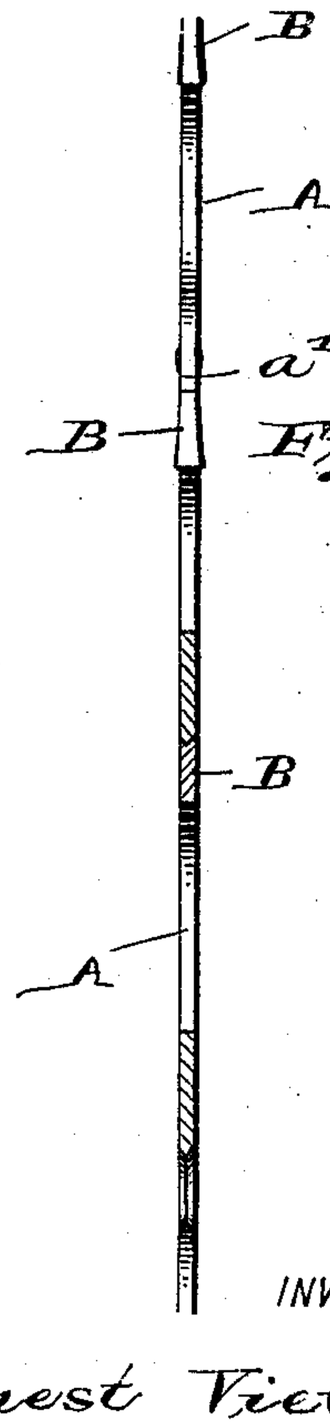

Fig. 3.

WITNESSES:

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SAW.

SPECIFICATION forming part of Letters Patent No. 551,458, dated December 17, 1895.

Application filed April 20, 1895. Serial No. 546,517. (No model.)

To all whom it may concern:

Be it known that I, ERNEST VIEWEGH, 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 Saws, of which the following is a specification.

The object of my present invention is to provide a form of inserted teeth for saws, especially band-saws and straight saws, in which such teeth or tooth-points are so disposed as that removal and replacement shall not change the tension of the saw-plate.

Said invention will be first fully described and the novel features thereof then pointed out in the claims.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a side elevation of a fragment of a straight saw and tooth-points therefor embodying in their formation and arrangement my said invention; Fig. 2, a horizontal sectional view looking upwardly from the dotted line 2 2 in Fig. 1, and Fig. 3 a view partially in front elevation and partially in section, as seen from the dotted line 3 3.

In said drawings the portions marked A represent the saw-plate, and B the tooth-points.

The saw-plate A has tooth extensions A′ on the front or cutting edge similar to the corresponding portions of solid saw-teeth. They are cut away on the lower sides so as to leave overhanging projections a', the ends of which terminate in a surface, the boundary lines of which are substantially at right angles with the body of the saw-plate and with the course of the saw in operation, and from the extreme back point on the under side of said projections a' the boundary lines of the tooth portions A′ run, for the most part, in a similar direction, but are preferably curved or rounded at the top and bottom to avoid sharp corners, and also to facilitate the assembling of the parts, and hold them securely when assembled. The surfaces of the last-named portions are preferably beveled to an edge, and the tooth-points B at the corresponding points are V-shaped, so that the said tooth-points will fit onto said surfaces and be held there by their own conformation. The under sides of the projections a' have semicircular notches therein, and the corresponding edges of the tooth-points B have corresponding semicircular notches, and these notches together, when the parts are assembled, form round holes adapted to receive the rivets a. It will be observed that there is no rivet-hole through or entirely within either of the parts. It will be further observed that the thrust on the tooth-points occasioned by the operation of sawing comes squarely against straight surfaces which are substantially at right angles with the saw-blade and with the line of motion of the saw, so that there is no torsional strain on the saw, but instead the same direct strain as where solid teeth are used. The rivets, being interposed between surfaces which are in effect in line with the saw, simply lift against the points a', and consequently have no effect upon the tension of the saw-plate. Tooth-points can therefore be removed when broken or worn out and others inserted as often as desired, without in any way affecting the saw-plate, and thus what is a great danger in the use of inserted teeth for saws as they are ordinarily constructed and arranged is avoided. The round formation of the recesses at the bottom of the tooth portions A′, in which the lower ends of the tooth-points B enter, and the V-shaped formation of the edges where they come together, together with the arrangement of the rivet, amply secure the tooth-points in place, while avoiding the disadvantages above pointed out.

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

1. The combination of a saw plate, having notched projections on its edge, with overhanging points, and approximately straight surfaces substantially at right angles with said saw plate on their lower sides; and tooth points formed to fit against said surfaces, whereby the strain on the tooth points during the operation of cutting is directly against the tooth extensions, and torsional strain on the saw plate avoided, substantially as set forth.

2. The combination of a saw plate provided with tooth extensions having overhanging projections, and surfaces against which tooth points may bear, with semi-circular

notches on the under side of said overhanging projections; and tooth points having a corresponding formation and corresponding semicircular notches, and rivets adapted to be inserted in the opening formed by said two notches, whereby the strain of riveting is brought to exert its force outwardly against the overhanging projections, and the changing of the tension of the saw plate in the process of riveting thus avoided, the several parts being arranged and operating substantially as shown and described.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 17th day of April, A. D. 1895.

ERNEST VIEWEGH. [L. S.]

Witnesses:
CHESTER BRADFORD,
JAMES A. WALSH.