(No Model.)

E. VIEWEGH.

SAW.

No. 555,983. Patented Mar. 10, 1896.

Fig. 1.

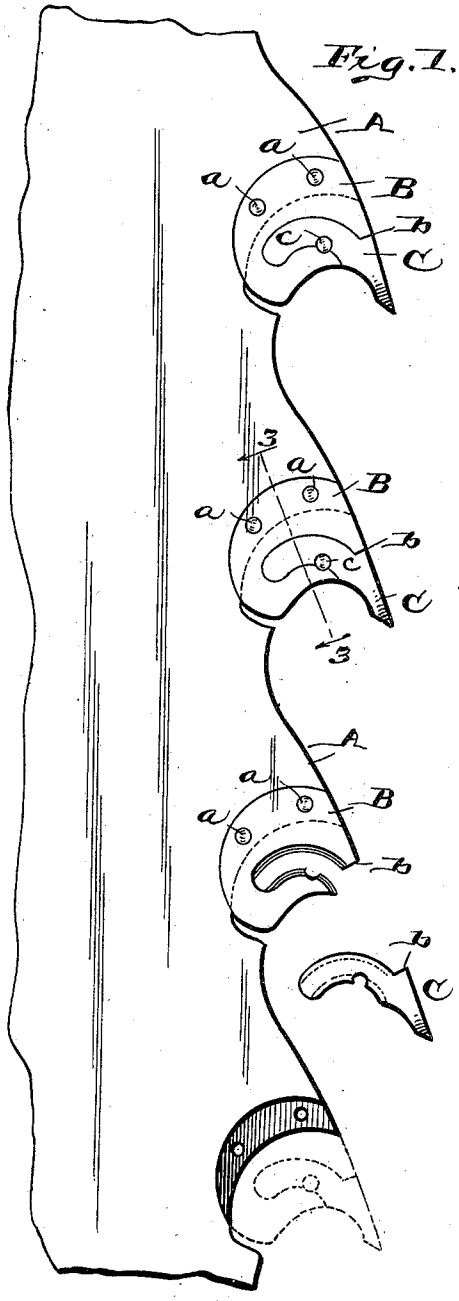


Fig. 2.

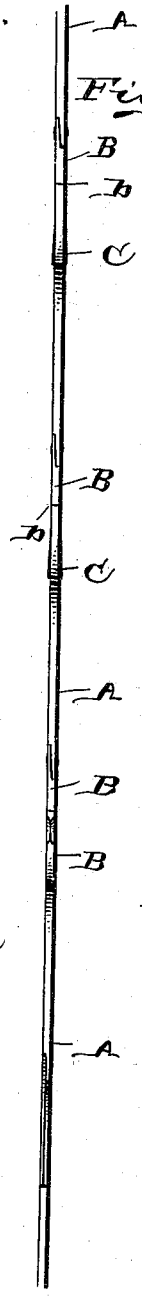


Fig. 3

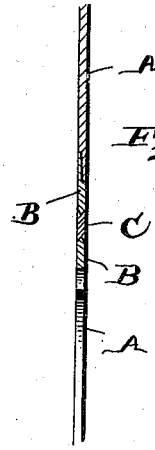
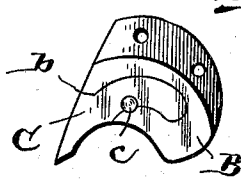


Fig. 4.



WITNESSES:

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SAW.

SPECIFICATION forming part of Letters Patent No. 555,983, dated March 10, 1896.

Application filed May 14, 1895. Serial No. 549,285. (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.

My object is to improve that class of inserted or renewable saw-teeth which are adapted to be used with straight saws or band-saws, especially the latter. The character and novel features of said invention will be first fully described, and then particularly 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 saw provided with tooth-point holders and tooth-points constructed in accordance with my present invention; Fig. 2, a front edge elevation of the same; Fig. 3, a detail sectional view on the dotted line 3 3 in Fig. 1; and Fig. 4, an elevation from the opposite side to that illustrated in Fig. 1, or a separate tooth-point holder and tooth-point.

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

The saw-plate A is cut away, as shown at the lower portion of Fig. 1 on curved lines, and halved or scarfed, so that when the tooth-point holders are applied the aggregate thickness shall be only substantially that of the saw-plate alone. At the extreme lower point of the depressions between the teeth there is some additional cutting, leaving an interstice between the lower edge of each tooth-point holder and the adjacent portion of the saw-plate, for a purpose which will be presently explained. The tooth-point holders B are also formed on curved lines and scarfed away, so that the formation thereof, where they come in contact with the seats formed therefor on the saw-plate, shall correspond to such seats, so that when the parts are assembled a smooth and perfect fit may be secured.

As will be observed in Figs. 2 and 3, the line which divides the assembled parts is at a slight angle or not precisely parallel with the sides of the saw-plate. This is for the purpose of securing some additional strength at the points where the parts shoulder together, leaving to each part a little more than half its former thickness at the shoulder-point.

The tooth-point holders are preferably secured to the saw-plate by rivets *a*, and the attachment may be reinforced by brazing or soldering. The tooth-point holders are further provided with curved slots or recesses, preferably V-shaped upon the edges, and which are adapted to receive the tooth-points, as will be presently described.

The saw-plate and tooth-point holders may be made separate, as shown, in the first instance, in making the saw, or they may be made in a single structure at first, including the interstices, and then, should the spring-like front members or any of them become broken in use, the saw-plate can be further cut away and the exact form of tooth-point holders shown in the drawings supplied as repairs.

The tooth-points C are adapted to be inserted in the recesses in the tooth-point holders and have V-shaped grooves to fit over the V-shaped edges of said recesses. At the upper side a shoulder is provided at *b* which serves as a direct support to the cutting-point of the device when in use. On the front sides of these tooth-points are semicircular notches, and there are corresponding notches in the opposing faces of the tooth-point holders which, when the tooth-points are inserted in place, together form holes to receive rivets *c*. These rivets when inserted complete the attachment of the tooth-points to the tooth-point holders, and also necessarily exert some strain upon the outer portions of said tooth-point holders. Such rivets, in solid saw structures, where tooth-point holders are not employed, exert such a strain upon the saw-plate as to change its tension, and this is one advantage in employing tooth-point holders, as is generally understood. Such tooth-point holders, however, when closely fitted against the body of the saw-plate at all points, are apt to communicate some of the strain thus received to the saw-plate, and thus approximately the same disadvantage is present as where the slots are in the saw-plate itself. This is obviated in the present case by the extra cutting away at the bottom portion,

whereby an interstice is left between the lower or outer part of each tooth-point holder and the adjacent portion of the saw-plate, as shown. The outer portions of the tooth-point holders thus become springs which are free from contact with adjacent parts of the saw-plate and may yield without disturbing the tension of said saw-plate at all. This is especially useful in cases where such portions become "set" slightly from repeated use or otherwise and where the rivet has consequently to be thickened somewhat in order to secure a tight union between the parts, when, if some such provision were not made, the strain upon the saw-plate would increase at each renewal of tooth-points.

As will be readily understood, tooth-points can be renewed when worn by simply displacing the rivets *c*, and the tooth-point holders also can be renewed if broken or worn out by displacing the rivets *a*. The tooth-point holders and the adjacent portions of the saw-plate to which they are attached being cut or scarfed away equally on their sides which come together, the total thickness of the saw is not increased by their use, while the tapering form of the scarfing or halving retains a good measure of the original strength, sufficient to withstand all strain to which the parts are subjected in use.

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

1. The combination, with a saw having circularly-formed seats, and halved or scarfed on curved lines; of tooth-point holders, similarly halved or scarfed on curved lines, and fitted thereon; rivets securing said tooth-point holders to said saw-plate; and tooth-points adapted to be seated in recesses or slots in said tooth-point holders, substantially as shown and described.

2. The combination, with a saw-plate, of an inserted saw-tooth structure, said saw-plate and said saw-tooth structure being halved or scarfed and formed on curved lines, the scarfing being somewhat tapered in character whereby each part is left of slightly more than one-half the original thickness at the shoulder-point, and means for securing the scarfed parts together, substantially as shown and described.

3. The combination with a saw, of tooth-point holders secured thereon, said holders and their bases on the saw-blade being halved or scarfed together on curved lines, said holders being also formed with curved recesses to receive the tooth-points, the member thereof outside said recess being "spring-like," the saw-blade being cut away to form interstices between it and the lower portion of said members, said tooth-points inserted in said recesses, and rivets inserted between said tooth-points and said members in holes formed by notches in said parts, substantially as set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 8th day of May, A. D. 1895.

ERNEST VIEWEGH. [L. S.]

Witnesses:
CHESTER BRADFORD,
JAMES A. WALSH.