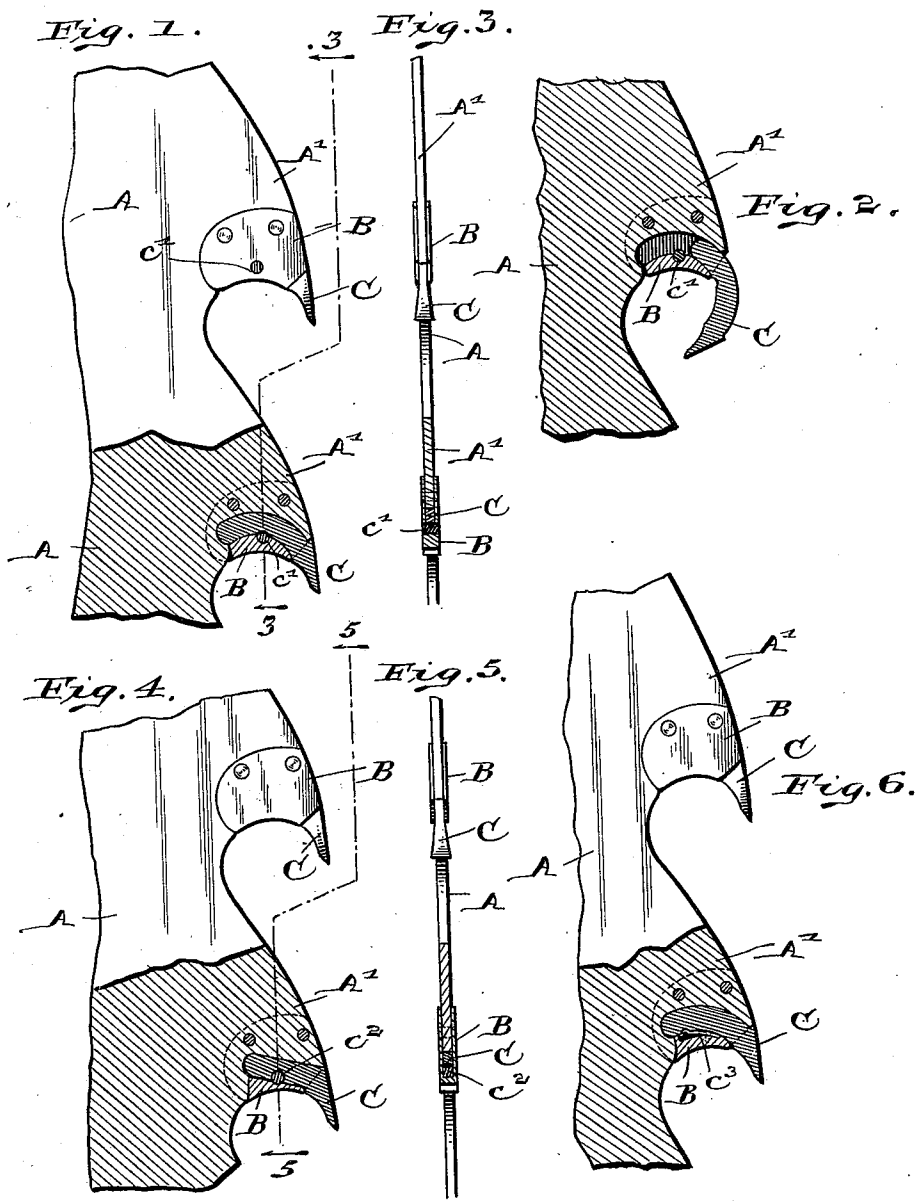


(No Model.)

A. KRIEGER.
SAW.

No. 561,115.

Patented June 2, 1896.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ANDREW KRIEGER, OF INDIANAPOLIS, INDIANA.

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SPECIFICATION forming part of Letters Patent No. 561,115, dated June 2, 1896.

Application filed June 25, 1895. Serial No. 564,012. (No model.)

To all whom it may concern:

Be it known that I, ANDREW KRIEGER, 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 present invention consists in a certain improvement upon that for which Letters Patent of the United States No. 540,065 were granted to me, dated May 28, 1895, whereby removable rivets are dispensed with as a means for securing the tooth-points, and compressible securing devices substituted therefor, so that said tooth-points can, by the application of suitable force, be removed and reinserted, or others substituted, without disturbing said securing devices, all as will be hereinafter more particularly described and claimed.

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 view of a fragment of a saw-plate including two teeth, one being shown in side elevation and the other in central vertical section, provided with securing devices embodying my said invention; Fig. 2, a similar view to a portion of Fig. 1, except that the tooth-point is shown in the act of being inserted; Fig. 3, a view, partly in edge elevation and partly in vertical section, through a tooth-point and adjacent parts, as seen when looking in the direction indicated by the arrows from the dotted line 3 3 in Fig. 1; Fig. 4, a view similar to Fig. 1, except that the form of the tooth-point is somewhat different, and the arrangement of the securing device is also somewhat different, said securing device, as in the figures already described, being what I have denominated a "compressible rivet;" Fig. 5, a view similar to Fig. 3, but of the construction shown in Fig. 4, as seen from the dotted line 5 5 therein; and Fig. 6, a view also similar to Figs. 1 and 4, but showing a metal spring as the securing device in place of the compressible rivet.

The general construction of the saw-plate A, the tooth projections or bases A' thereon, the tooth-point holders B, and the tooth-points C are all sufficiently described and explained in the specification of my aforesaid Letters Patent No. 540,065, and being a band-saw of

a construction simple and readily understood, and not of the essence of my present invention, will not be particularly described herein, except incidentally in describing the invention.

It is desirable in producing saws of this character that the tooth-points should be capable of being removed and replaced with the least possible trouble, and, if possible, without disturbing the securing devices. To accomplish this is the object of my present invention. As may be readily seen, the tooth-points themselves are very small, and consequently of little weight, so that there is not much tendency on their part to be thrown out by the force imparted thereto by the motion of the saw, especially that of a band-saw, for which they are especially designed, and, therefore, in order to be efficient does not need to be such a one as cannot be overcome by suitable force, which may be purposely applied to the tooth-point. I have discovered by experiment that in place of the ordinary rivets of metal small pins or pieces of compressible material, such as rubber or leather, may be employed as securing devices and so arranged that the tooth-points may be forced past them in inserting and forced out when desired, such pins or pieces yielding sufficiently to permit them to pass and still holding them sufficiently firm for all ordinary purposes. Such pins or pieces or compressible rivets are shown in all the figures of drawings except Fig. 6. In Figs. 1, 2, and 3 they are shown as extending through the tooth-point holders B, in which the larger portion of the hole for receiving them is formed, while a small depression is formed in the adjacent face of the shank of the tooth-point. In Figs. 4 and 5 they are shown as of only the length of the thickness of the shank of the tooth-point, and the greater portion is inclosed within a recess in the front side of said tooth-point, while a small depression is preferably formed in the inner adjacent face of the tooth-point holder. In Fig. 6 a spring is shown instead of the pin, said pin being shown as attached to the inner surface of the tooth-point holder and provided with a suitable bulging-point, while the corresponding depression is formed in the shank of the tooth-point. In each case it will be observed that a rounded or bulged formation is shown upon

one part and a slight recess upon the other part, which engage when the tooth-point is in place. The form of pin or compressible rivet shown in Figs. 1, 2, and 3 is marked c^1 , that shown in Figs. 4 and 5 is marked c^2 , while the spring shown in Fig. 6 is marked c^3 . All these devices, as will be readily understood, are capable of being compressed by the tooth-point shank as it is forced into place, and when said tooth-points have reached their final position said securing devices will spring into the small depressions, and thus hold them in such position with sufficient force for the purpose; and all the forms of securing devices illustrated, or any others which may be adapted equivalent thereto, remain continuously in place, and thus not only is the labor of removing and reinserting them saved, but the danger of losing them is avoided.

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

The combination, of a saw-plate, tooth-point holders attached thereto forming sockets for

the tooth-points, said tooth-points inserted in said sockets thus formed, a transverse aperture being formed between the adjacent edges of said tooth-point and said tooth-point holder at a suitable point longitudinally of said tooth-point, a part of said aperture being formed in one of said parts and part in the other but it being deep in one and shallow in the other, a compressible and expansible pin or rivet mounted to remain in the deep portion of said aperture and engage with the shallow portion in the other part, whereby as said tooth-point is inserted and withdrawn said pin or rivet will compress into said deep portion during this operation until it coincides with the shallow portion, when it will expand thereinto and secure said parts, substantially as set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 21st day of June, A. D. 1895.

ANDREW KRIEGER. [L. S.]

Witnesses:

CHESTER BRADFORD,
JAMES A. WALSH.