

(No Model.)

H. C. BARBEE.
SAW.

No. 564,582.

Patented July 28, 1896.

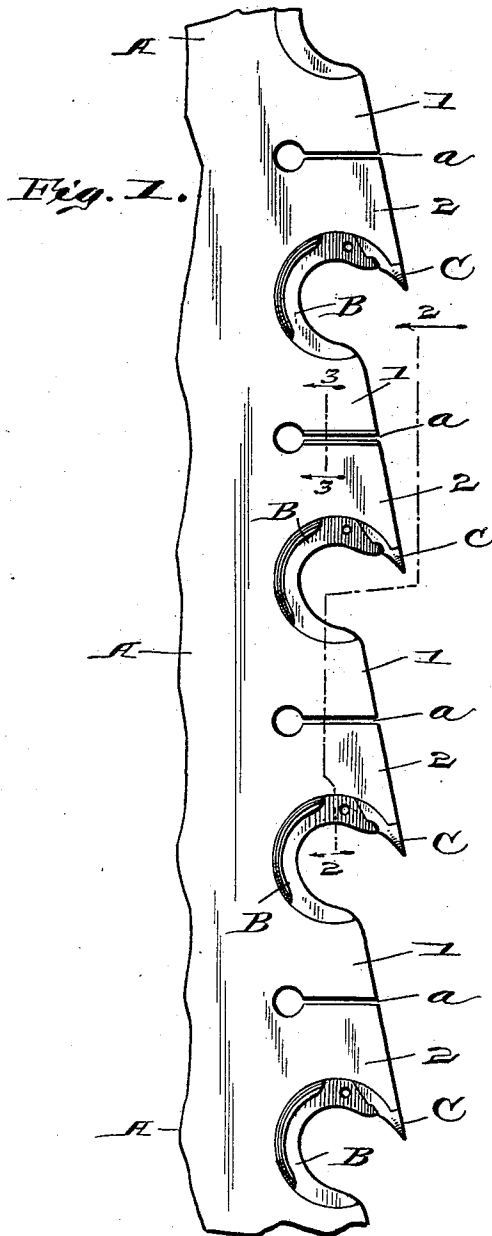


Fig. 2.

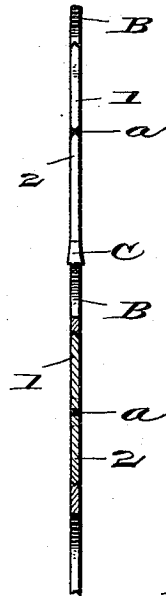


Fig. 3.

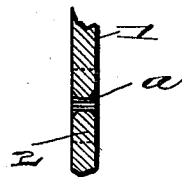
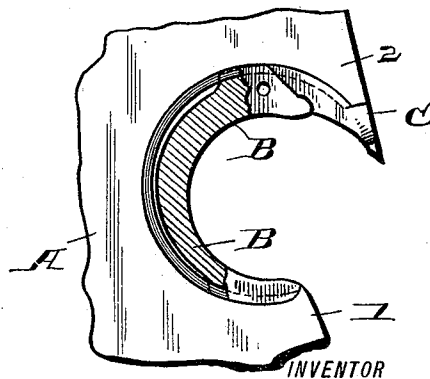


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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

SAW.

SPECIFICATION forming part of Letters Patent No. 564,582, dated July 28, 1896.

Application filed May 11, 1896. Serial No. 591,081. (No model.)

To all whom it may concern:

Be it known that I, HARRY C. BARBEE, 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.

Inserted teeth in saws exert a tension on the toothed edge of the saw-blade. In thin saws this is a serious disadvantage, as thereby the saw-blade is caused to twist or buckle. Inserted teeth have, therefore, not been successfully used with such saws, particularly band-saws. Band-saws must also be free to bend as they pass over the pulleys. The object of my invention is to so construct the saw-blade that the strain from the inserted teeth and their holders shall not have the straining effect on such blade, and so that the saw-blades may have an unimpaired flexibility.

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 inserted teeth and tooth-holders and constructed in accordance with my present invention; Fig. 2, a view partially in section and partly in front elevation as seen from the dotted line 2 2, in Fig. 1; Fig. 3, a fragmentary view, on an exaggerated scale, on the dotted line 3 3 in Fig. 1; and Fig. 4, an enlarged partially sectional view illustrating the form of the tooth-holder more clearly.

In said drawings the portions marked A represent the saw-plate, B the saw-tooth holders, and C the saw-teeth proper, or cutting-points.

As in all ordinary inserted-tooth saws, a portion of the saw-plate extends between the spaces into which the teeth and tooth-holders are placed. In my improved saw this projection is divided into two parts, 1 and 2, by a slit *a*, which slit preferably terminates in a round hole, and which may extend to such depth as desired. An appropriate form and arrangement are shown in Fig. 1.

The parts 1 and 2 being thus separated, they may be forced toward each other somewhat when the strain of the tooth-holders B

comes upon them without transmitting any considerable strain to the body of the saw-plate, and thus the teeth can be inserted and held in place without the disadvantages above spoken of.

As shown—especially in Fig. 3 and in those portions of Figs. 2 and 1 opposite said Fig. 3—the edges bounding the slits *a* may, if desired, be beveled somewhat on the corners, so that there will be less danger of sawdust lodging there. This, however, is a detail of construction, and is not essential to my invention.

The tooth-holders B are, as is quite common, semicircular structures adapted to fit into the spaces formed therefor and for the tooth-points in the saw-plate, and to hold said tooth-points firmly in place. They are, however, peculiar in that throughout a considerable portion of their length they are so cut or formed as not to come in actual contact with the adjacent portions of the saw-plate, as is clearly shown in Figs. 1 and 4. This leaves said portions of the saw-plate free of restraint, and thus with their flexibility unimpaired by the presence of these tooth-holders, which are commonly of stiffer material than the body of the saw-plate. The saw-plate is thus substantially as free to bend at the points opposite the bottoms of the spaces which receive these tooth-holders as they are opposite the slits *a*, and thus the saw is adapted to pass around the wheels on which it is mounted much more freely than when these tooth-holders are in engagement with the entire adjacent portions of the edge of the saw-plate. This construction is also of advantage in that the spring force of the tooth-holders is all directly against the parts 1 and 2 of the projecting portions of the saw-plate, and not upon the intervening portions below where the tooth-holders are cut away.

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

1. In an insertible-tooth saw, the combination of the plate formed with openings to receive the tooth and holder, said tooth mounted in said opening and said holder mounted to bear against said tooth on one side, and against the plate on the opposite side of said opening, a slit being formed in

said plate between the several openings, whereby said plate is relieved of the strain resulting from the use of the tooth-holder, substantially as set forth.

5 2. A saw formed with seats for inserting teeth in the form of deep recesses with bearing-points for the holders on opposite sides, teeth and holders mounted in said seats, said
10 holders being of a form to exert a strain against said points, and slits formed in the saw-plate between said seats, whereby said strain is relieved, substantially as set forth.

15 3. A saw having deep recesses to receive insertible teeth and holders therefor, said teeth mounted therein, and spring-holders inserted to bear at one part against one side of said recesses and at another part against

the opposite side, and slits in the plate between said recesses, substantially as set forth.

4. A saw having recesses to receive teeth 20 and holders therefor, teeth mounted in said recesses, and holders also mounted in said recesses and bearing against opposite sides thereof, their backs being cut away at their middle portion, and slits formed in said saw 25 between said recesses, substantially as set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 6th day of May, A. D. 1896.

HARRY C. BARBEE. [L. S.]

Witnesses:

CHESTER BRADFORD,
JAMES A. WALSH.