

(No Model.)

A. HARMAN.
CROSSCUT SAW.

No. 572,604.

Patented Dec. 8, 1896.

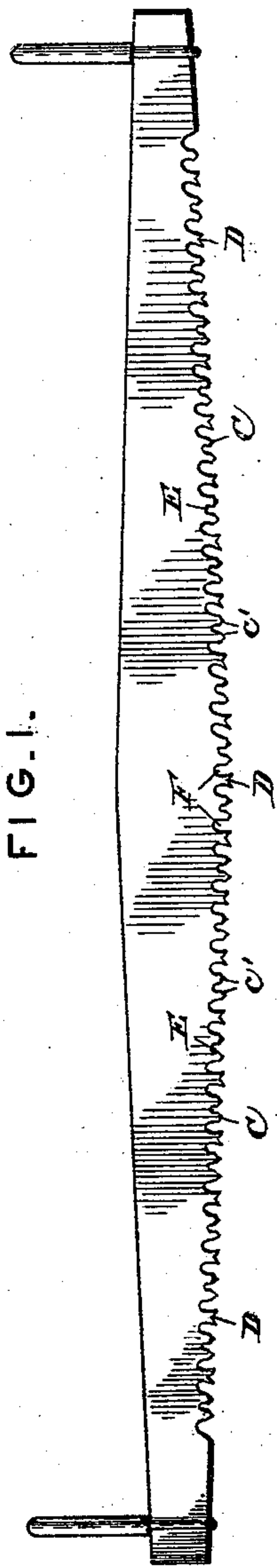


FIG. 1.

FIG. 3.

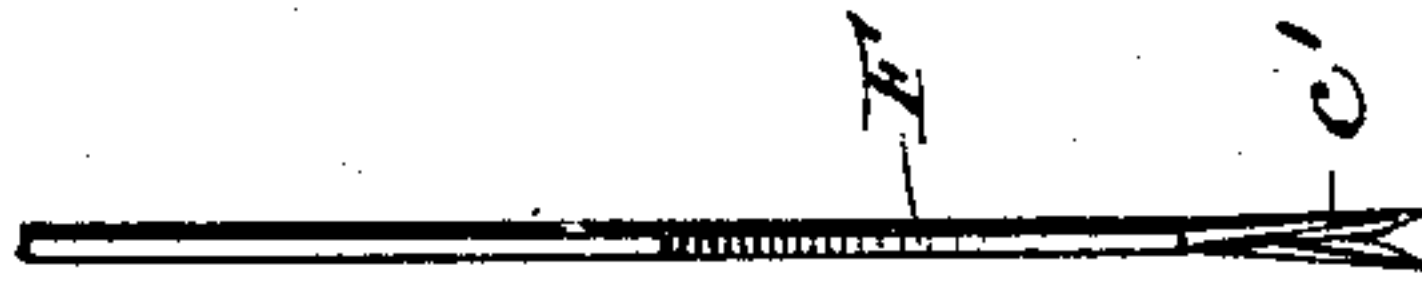
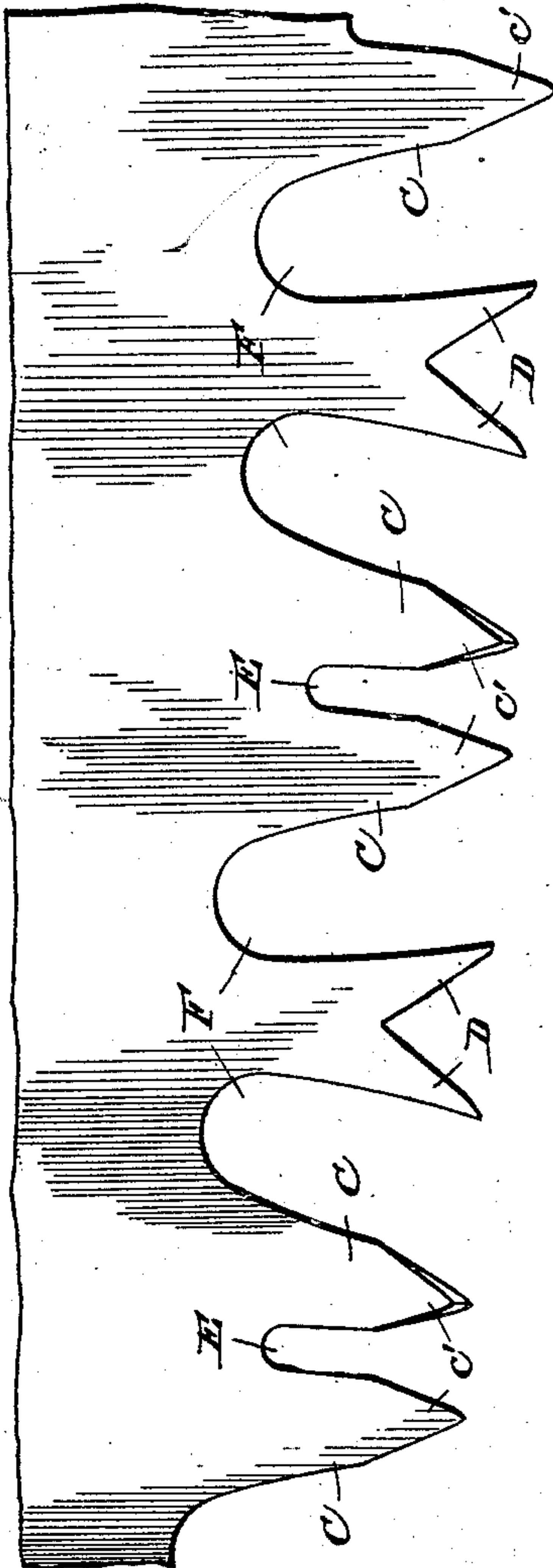


FIG. 2.



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Witnesses

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UNITED STATES PATENT OFFICE.

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CROSSCUT-SAW.

SPECIFICATION forming part of Letters Patent No. 572,604, dated December 8, 1896.

Application filed August 19, 1893. Serial No. 483,582. (No model.)

To all whom it may concern:

Be it known that I, ANANIAS HARMAN, a citizen of the United States, residing at Roann, in the county of Wabash and State of Indiana, have invented certain new and useful Improvements in Crosscut-Saws; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in crosscut-saws.

The object of the present invention is to improve the construction of crosscut-saws, to increase their efficiency and ease of operation, and to enable the dust to be readily lifted and carried out of the kerf.

A further object of the invention is to provide a crosscut-saw which will require a minimum amount of filing to sharpen it.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

In the drawings, Figure 1 is a side elevation of a crosscut-saw constructed in accordance with this invention. Fig. 2 is an enlarged detail view of a portion of the saw. Fig. 3 is an end elevation of the portion shown in Fig. 2.

Like letters of reference indicate corresponding parts in all the figures of the drawings.

The saw consists of cutting-teeth arranged in pairs and alternating with pairs of chisel or cleaning teeth, C being the cutting-teeth and D the chisel or cleaning teeth. The crotch of the chisel or cleaning teeth D, which are formed on a single shank, is of triangular form, while the cutting-teeth are separated by a curved crotch and a vertically-disposed supplemental clearing-space E. The chisel or cleaning teeth D have greater breadth at the point than at the shank. They are about one thirty-second of an inch shorter than the cutting-teeth to prevent them from catching in sawing light timber and working injury to

the saw, and they slightly curve inward at their outer sides to the base of the shank. The inner edges of the chisel or cleaning teeth are straight and present square shoulders, and their outer edges are also straight, said straight inner and outer edges being formed at right angles with the side of the saw, and by this construction they are adapted to lift the sawdust from the bottom of the kerf and discharge it at the end of each stroke. It also imparts to the saw a sufficient downward pull to lessen the labor and time in sawing.

The cutting-teeth C are oppositely set, are provided with tapering points or cutting portions, and have inwardly-diverging outer edges which form oppositely-inclined main clearing-spaces F.

The inner and outer edges of the cutting-teeth above or inside the tapered cutting portion *c'* are straight and present square shoulders for the purpose of clearing the kerf of sawdust and to prevent any liability of the saw being wedged and checked in its movement, which might result were the upper portions or shanks of the teeth beveled. In this connection it is to be observed that the taper of the cutting portions *c'* of the teeth C combine with the straight outer sides of the cleaning-teeth or rakers D to form flared or enlarged mouths at the entrance to the clearing spaces or notches F, so that such clearing spaces or notches cannot choke up with sawdust, but will always readily clear themselves of the accumulations of sawdust which work therein, as will be readily understood by those skilled in the art. It may be further noted at this point that by reason of slightly curving the outer sides of the cleaning-teeth inward to the base of the shank carrying such teeth such shanks will be narrowed or contracted at their bases to provide a construction occupying but little space, and thereby allowing a greater number of teeth to be formed on the saw blade or body than in the ordinary crosscut-saws.

In sharpening the cutting-teeth it is only necessary to file the outer ends or tapered points, thereby greatly lessening the labor in sharpening saws; and it will be apparent that the clearing capacity of the saw is greatly increased by reason of the particular con-

struction of the main clearing-spaces and the supplemental clearing-spaces, together with the construction of the upper portion of the shank of the cutting-teeth.

5 From the foregoing description and the accompanying drawings the construction, operation, and advantages of the invention will be clearly apparent to those skilled in the art.

What I claim is—

10 In a crosscut-saw, the blade or body having chisel or cleaning teeth arranged in pairs, each pair of which chisel or cleaning teeth are formed at the outer end of a single shank contracted at its base and provided with a
15 triangular notch disposing the points of the teeth close together, and with outer and inner edges at right angles with the side of the saw, said blade or body also having oppositely-set cutting-teeth arranged in pairs and alter-

nating with the pairs of chisel or cleaning 20 teeth, each pair of cutting-teeth having outer tapered cutting portions and an intermediate vertically-disposed supplemental clearing-space, and oppositely-inclined main clearing spaces or notches F, formed between and 25 separating the pairs of cutting and cleaning teeth, said main clearing-spaces being provided with flared mouths between the adjacent points of the cutting and cleaning teeth, substantially as described. 30

In testimony whereof I affix my signature in presence of two witnesses.

ANANIAS HARMAN.

Witnesses:

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JACOB ^{his} × FRY.
mark