

No. 780,923.

PATENTED JAN. 24, 1905.

E. L. WEAVER.
GAGE FOR CROSSCUT SAWS.
APPLICATION FILED JAN. 26, 1904.

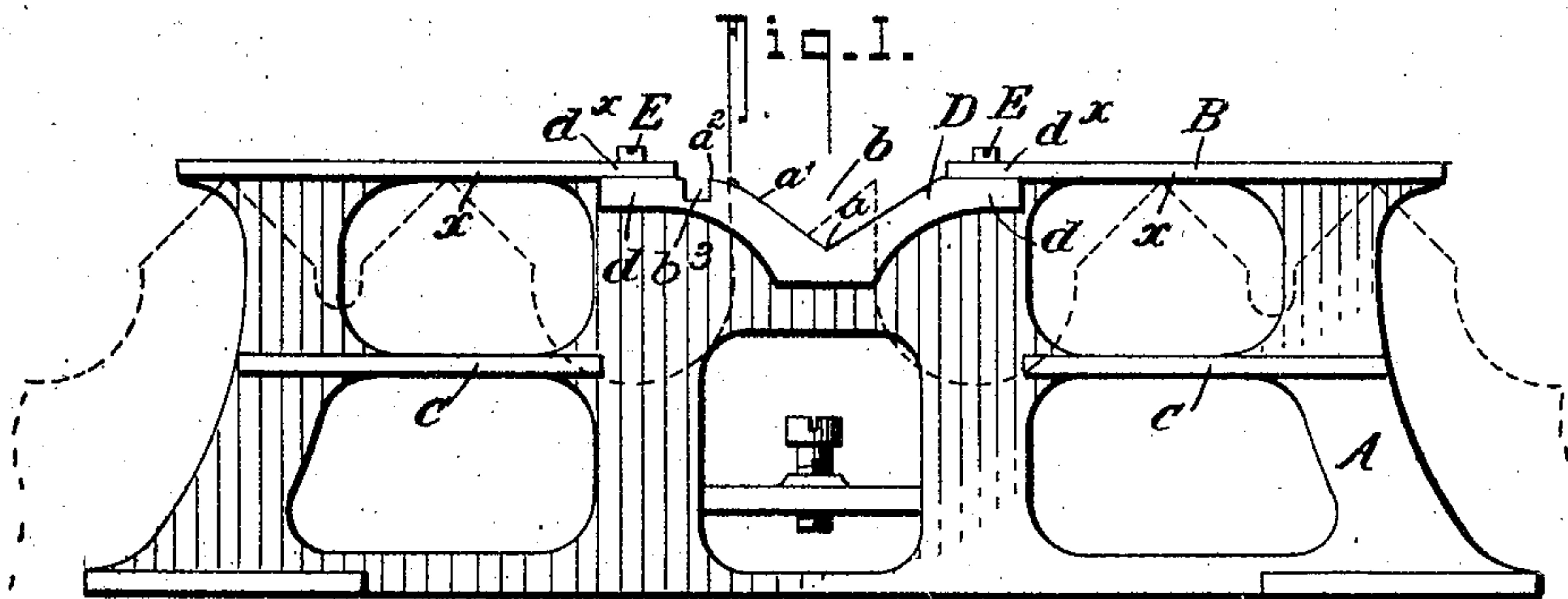


Fig. 2.

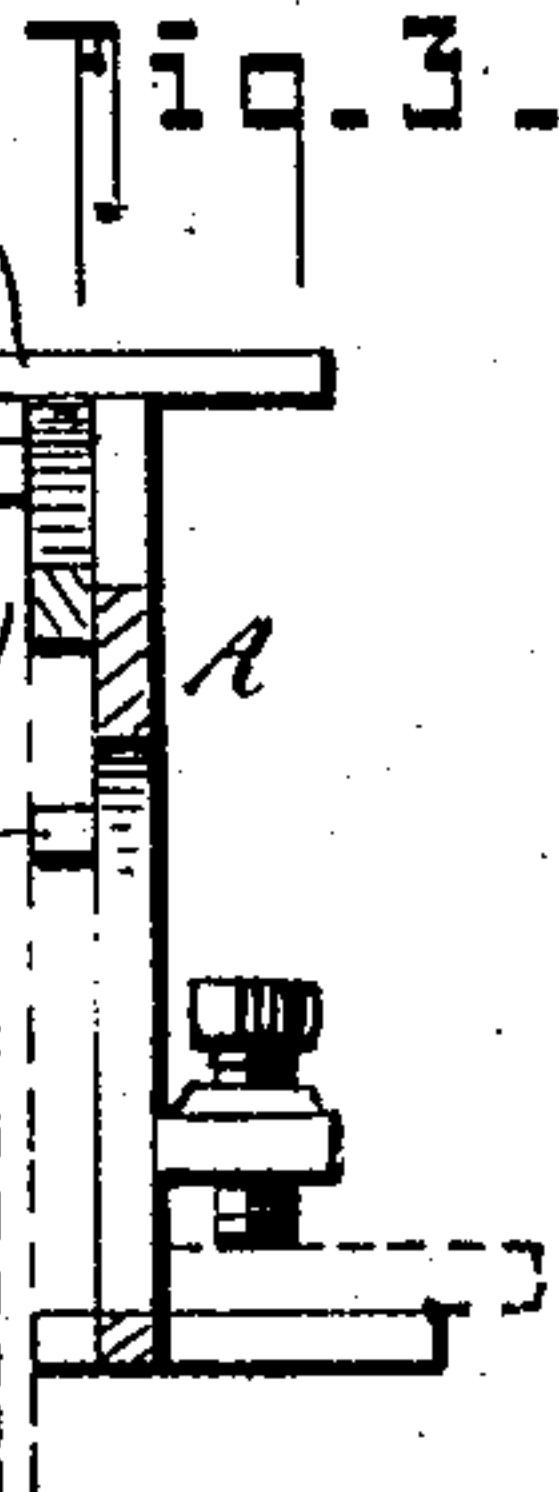
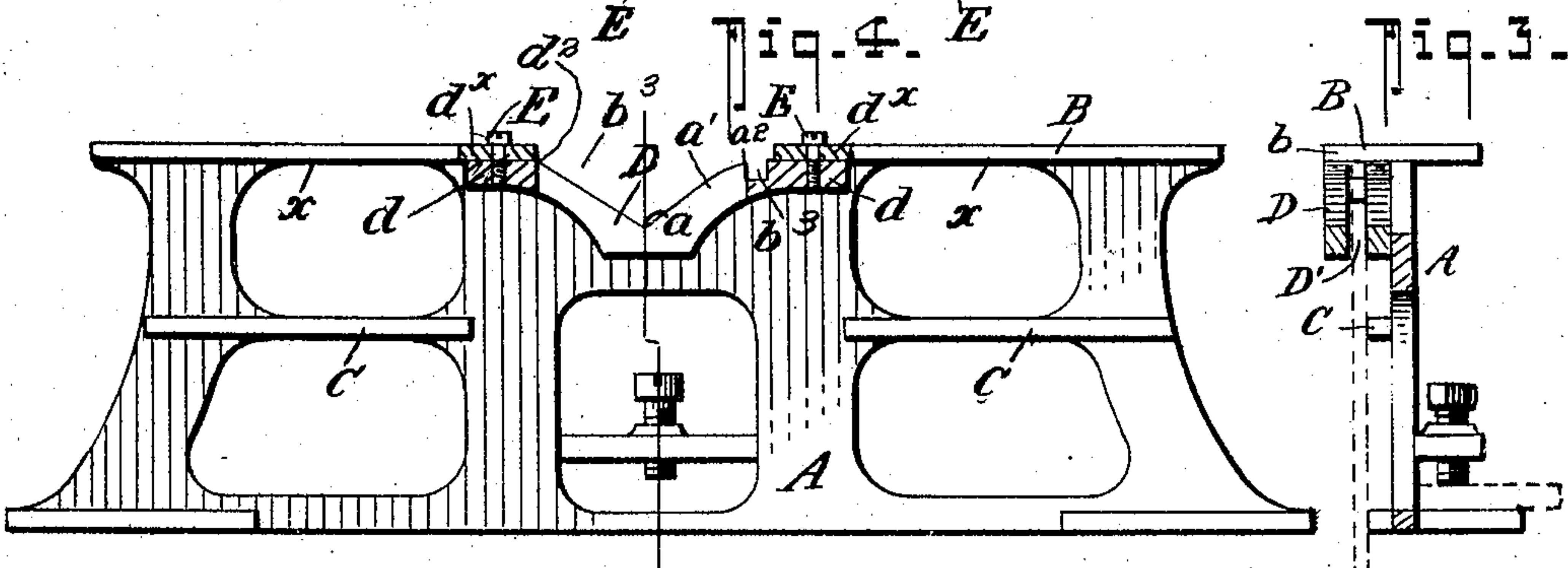
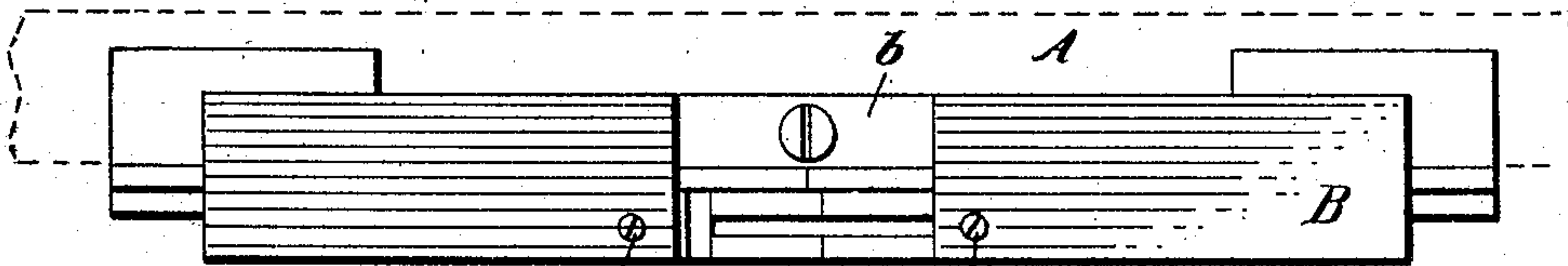
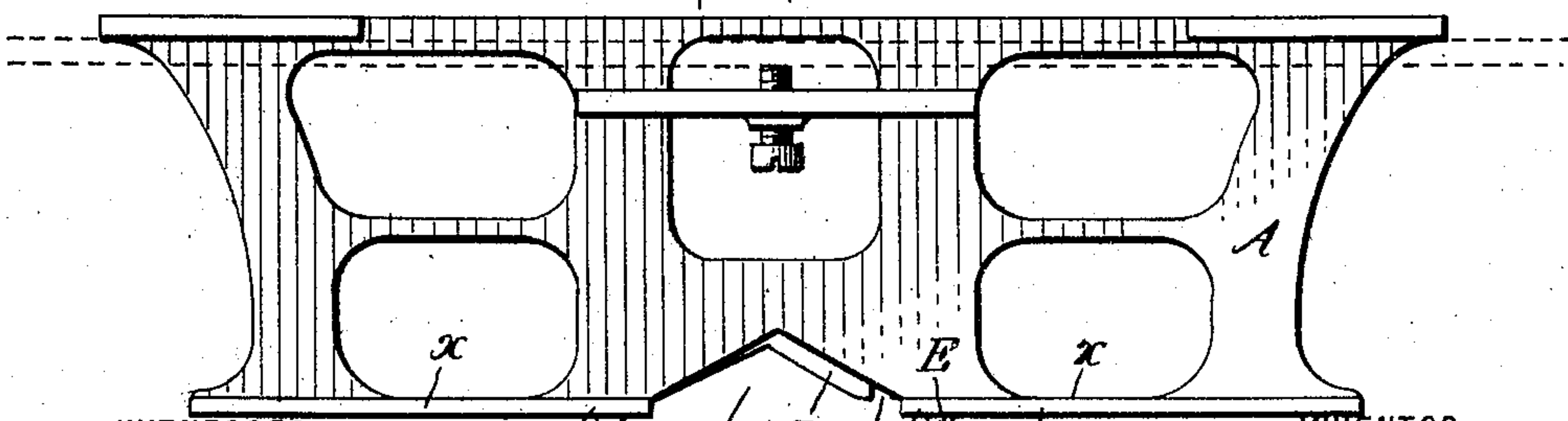


Fig. 5.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ELIJAH L. WEAVER, OF PORTLAND, OREGON, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO FRANK O. WEEKS, OF PORTLAND, OREGON.

GAGE FOR CROSSCUT-SAWS.

SPECIFICATION forming part of Letters Patent No. 780,923, dated January 24, 1905.

Application filed January 26, 1904. Serial No. 190,740.

To all whom it may concern:

Be it known that I, ELIJAH L. WEAVER, residing at Portland, in the county of Multnomah and State of Oregon, have invented a new and Improved Gage for Crosscut-Saws, of which the following is a specification.

My invention relates to improvements in gage devices provided for accurately gaging the raker-teeth of crosscut-saws, and it specifically seeks to provide a simple, inexpensive, and easily-manipulated gage device to enable the operator to quickly and accurately shape the raker-teeth and also file them to a proper gage and which has such construction whereby it can by simply reversing the same be used for shaping and gaging both sides of the raker-teeth.

With the above and other objects in view, which will hereinafter be described, my invention comprehends a device adapted to be secured to a suitable supporting-frame to slip over the raker-teeth and provided with a special form of anvil-surface for gaging both the curved and the angle shape of the raker-teeth, as well as its point shape, and which is also designed for being reversibly mounted on its supporting-frame, whereby the same anvil or gaging surface can be easily adjusted for either side of the raker-teeth.

In its more subordinate features my invention consists in a new article for the purposes described constructed in a manner hereinafter stated, pointed out in the claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a side view of a frame with my improvement applied, the saw being indicated in position to be gaged in dotted lines. Fig. 2 is a plan view of the same. Fig. 3 is a vertical longitudinal section thereof on the line 3 3 of Fig. 4. Fig. 4 is a side view showing the anvil or gage-piece reversed to engage the opposite edge of the teeth. Fig. 5 is a detailed view of my improved device.

In the practical application my invention is connected with a gage-frame of suitable construction adapted to be supported upon and movable over the raker and cutting teeth,

whereby my improvement can be readily brought into position to act on any one of the teeth to be gaged or corrected at a time.

In the drawings I have illustrated a conventional form of gage; but the said frame may be modified or of different shape, as the same *per se* forms no part of this invention. As shown, the gage-frame comprises a light cast skeleton frame A, which is provided at one side of the top portion with a lateral flange B, which forms a true plane surface or straight edge for sustaining the gage over the saw-teeth, and at a point midway thereof the bottom and top of the frame A have lateral ribs C, which hold the saw-body off and prevent the teeth from contacting with the side of the main portion or body of the frame A. The lateral flange B is cut away midway its length to provide an opening *b* for receiving a chilled-metal plate or anvil D, the peculiar construction of which and its coöperative connection with the frame A forms the essential feature of my invention.

The anvil D is of a length sufficient to straddle the space *b* with its ends *d d* adapted to lap under the adjacent ends *d^x* of the separating portions of the flange B, (see Fig. 1,) to which the ends *d d* are detachably secured by the screws E E, as shown.

The body of the anvil consists of a V-shaped portion, one arm of which from the crotch *a* to the point *a'* is in a straight line, but from the point *a'* to the point *a²* it curves upwardly and outwardly, and the curved portion terminates at a transverse notch *b³*, whose vertical walls are at right angles to the longitudinal plane of the member D. The line of juncture between the curved surface and the adjacent vertical wall of the notch *b³* lies in a plane slightly below the under surface of the flange B for a purpose presently explained. The other arm of the V-shaped portion of the plate D extends in a continuous line from *a* to *d²* and on an angle that corresponds to the angle or straight edge of the cutting and raker teeth. The V-shaped member D is also provided with a longitudinal slot D', which extends from the point *a'* to

the point d^2 , whereby the anvil-plate can be readily slipped over the raker and cutter teeth when it is desired to properly apply the gage. The manner in which my improvement is used and its advantages are best explained as follows:

To gage the raker-teeth, the gage member D is slipped onto the saw, over the particular raker-tooth to be operated on, as indicated in the drawings. The straight edge of one side of the tooth is then filed down in a plane with the straight portion $a a'$ of the anvil D, it being understood that by reason of the member D being a chilled plate the same prevents the file from cutting the straight edge of the tooth below the required plane. The end or point of the tooth is then bent into a proper curve in the vertical plane of the saw by hammering against it, the curved face between the points $a' a^2$ serving to limit the bend of the said point to conform to the curve of the anvil, so that the said point will be curved on an arc of the same radius as that of the curved face between the points $a' a^2$. This is possible since the anvil D is so designed that before the tooth-point has been curved it projects above the curved portion between the points $a' a^2$ of the anvil, (see Fig. 1,) and by hammering on this projected portion the desired curve may be given to the tooth end. After the curved portion has been thus gaged the outer edge of the tooth is filed true by reciprocating the file through the transverse recess in the die D. After one side of the raker-tooth has thus been gaged or set the entire gage is reversed, (see Fig. 4,) and the other side of the raker-tooth is then similarly operated upon. As the inclined faces of the die are in a plane parallel with the inclined faces of the cutter-teeth, the latter may also be gaged by fitting the anvil over the said teeth in a manner similar for the raker-teeth. By reason of the peculiar construction of the anvil and the

manner in which it can be fitted onto the teeth all of the teeth of the saw can be conveniently gaged or tested to bring their edges into a plane with each other and into alignment.

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

1. As a new article of manufacture, a gage-plate for crosscut-saw gages of the character described, whose upper face is formed with a V-shaped depression, and an upwardly and outwardly curved portion merging with one end of the V-shaped depression and a transverse notch adjacent the outer end of the curved portion, said gage-plate also having a longitudinal slot which extends the full length of the V-shaped and curved face portions thereof.

2. In a crosscut-saw gage the combination with a body portion comprising a vertical web and a horizontal web, said horizontal web being provided with a transverse cut-away portion and said vertical web being provided at one edge with a cut-away portion, a gage-plate formed with a longitudinal slot to receive the saw-tooth, said gage-plate being of a greater length than the opening or cut-away portion in the vertical and horizontal webs and having its ends secured to the under side of the separated ends of the horizontal web's portion, said plate also having its upper face formed with a V-shaped cut-away portion having one of its faces terminating in an outwardly and upwardly curved portion, and having a transverse recess at the point where the curved portion ends, all being arranged substantially as shown and for the purposes specified.

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Witnesses:

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J. E. CONBOY.