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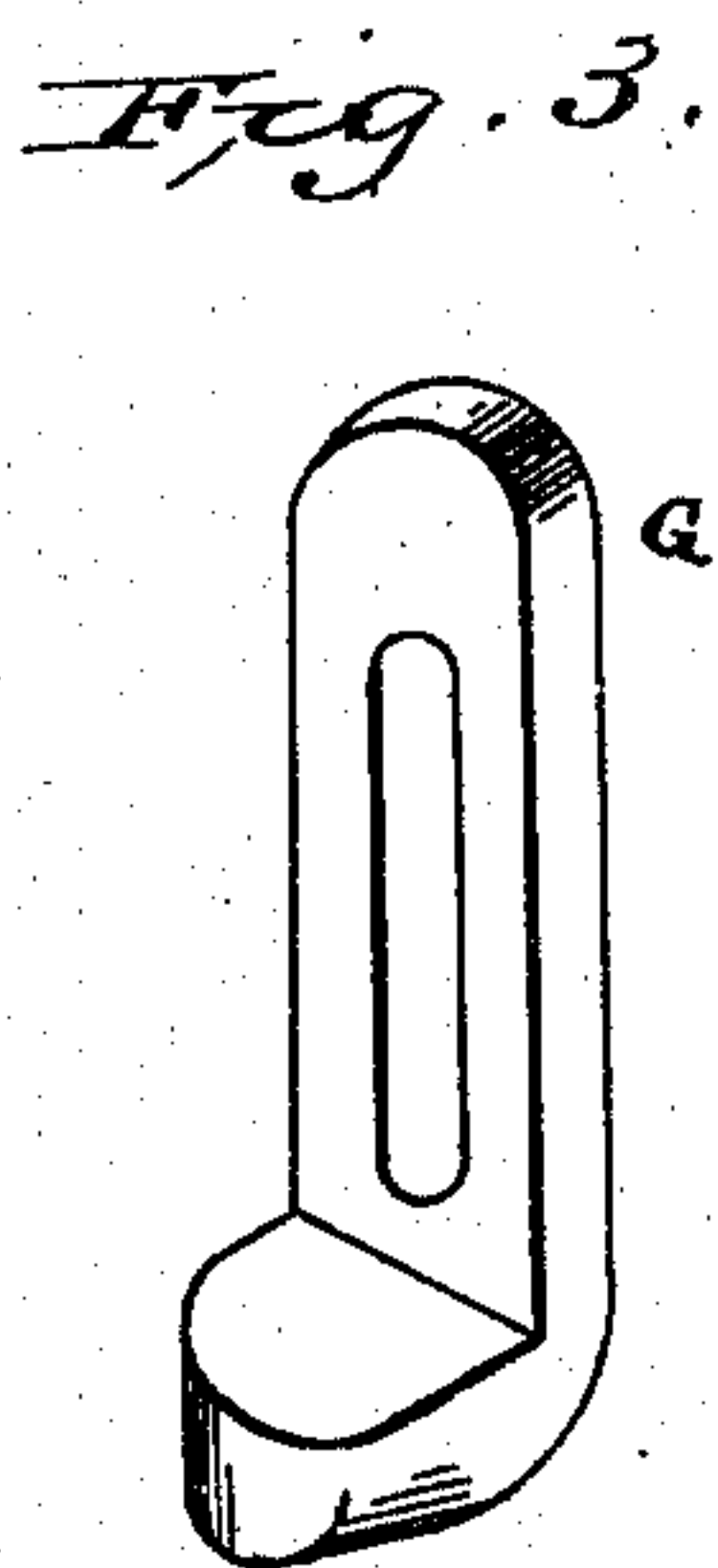
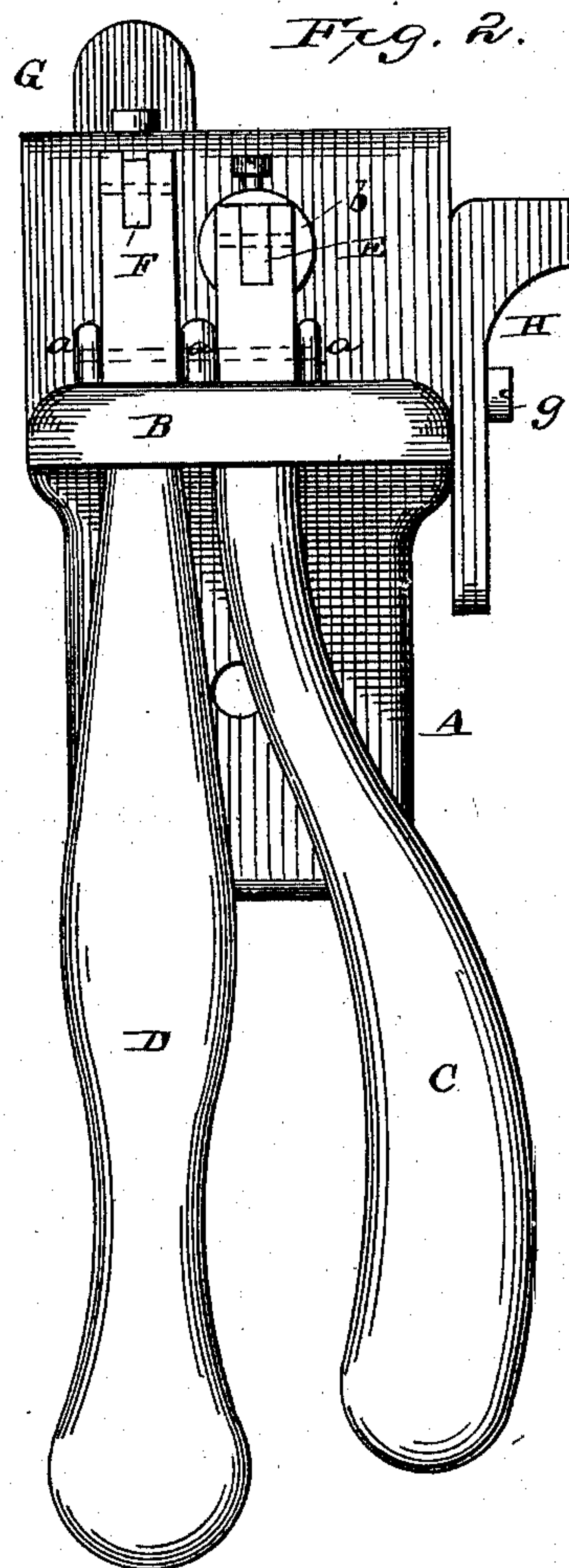
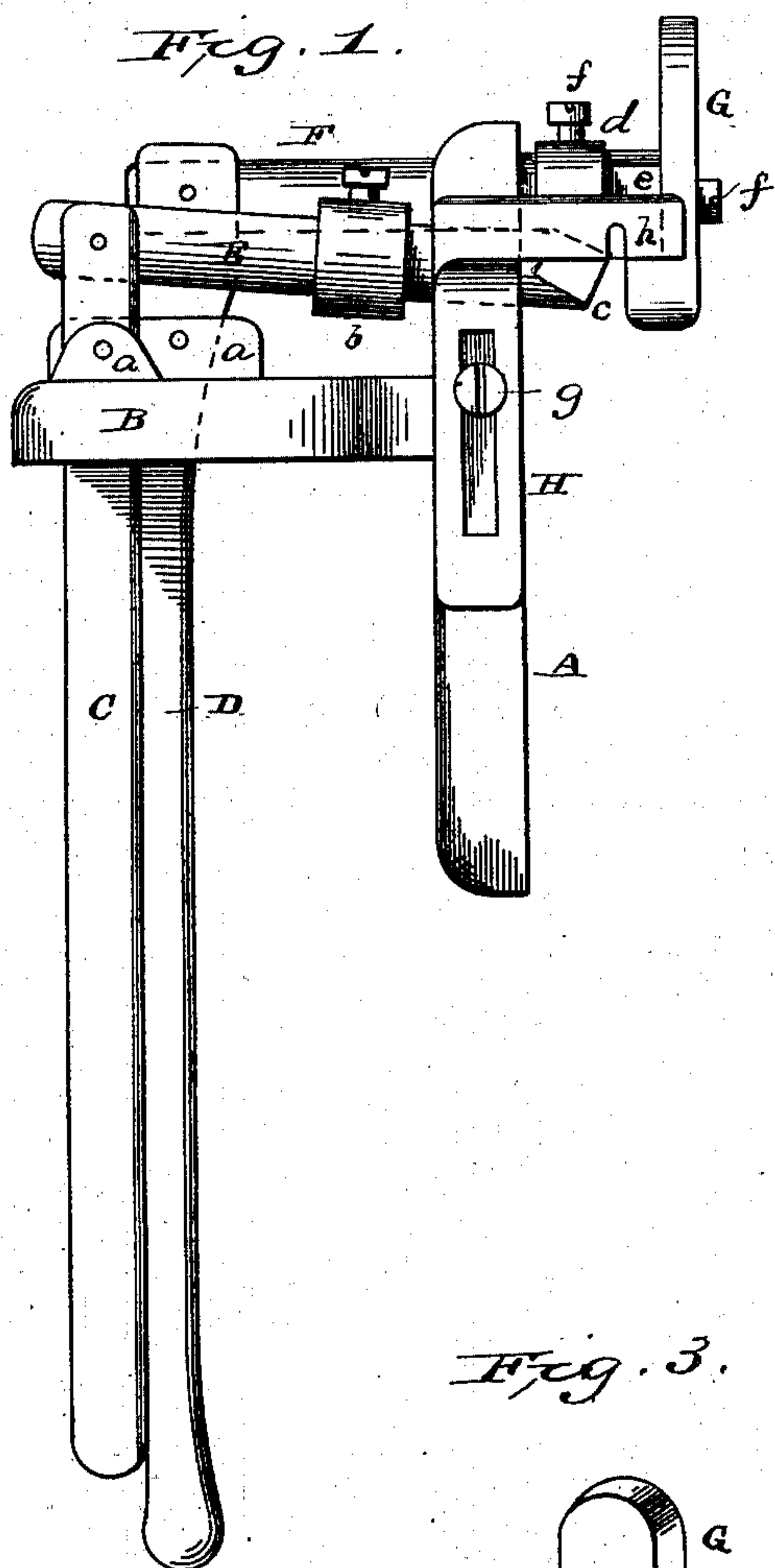
3 Sheets—Sheet 1.

J. W. PUGH.

COMBINED SAW SET AND JOINTER.

No. 274,030.

Patented Mar. 13, 1883.



Witnesses.

Edwin L. Yewell.
J. J. Mc Carthy.

Inventor.

John H. Pugh.
By C. M. Alexander
Attorney.

(Model.)

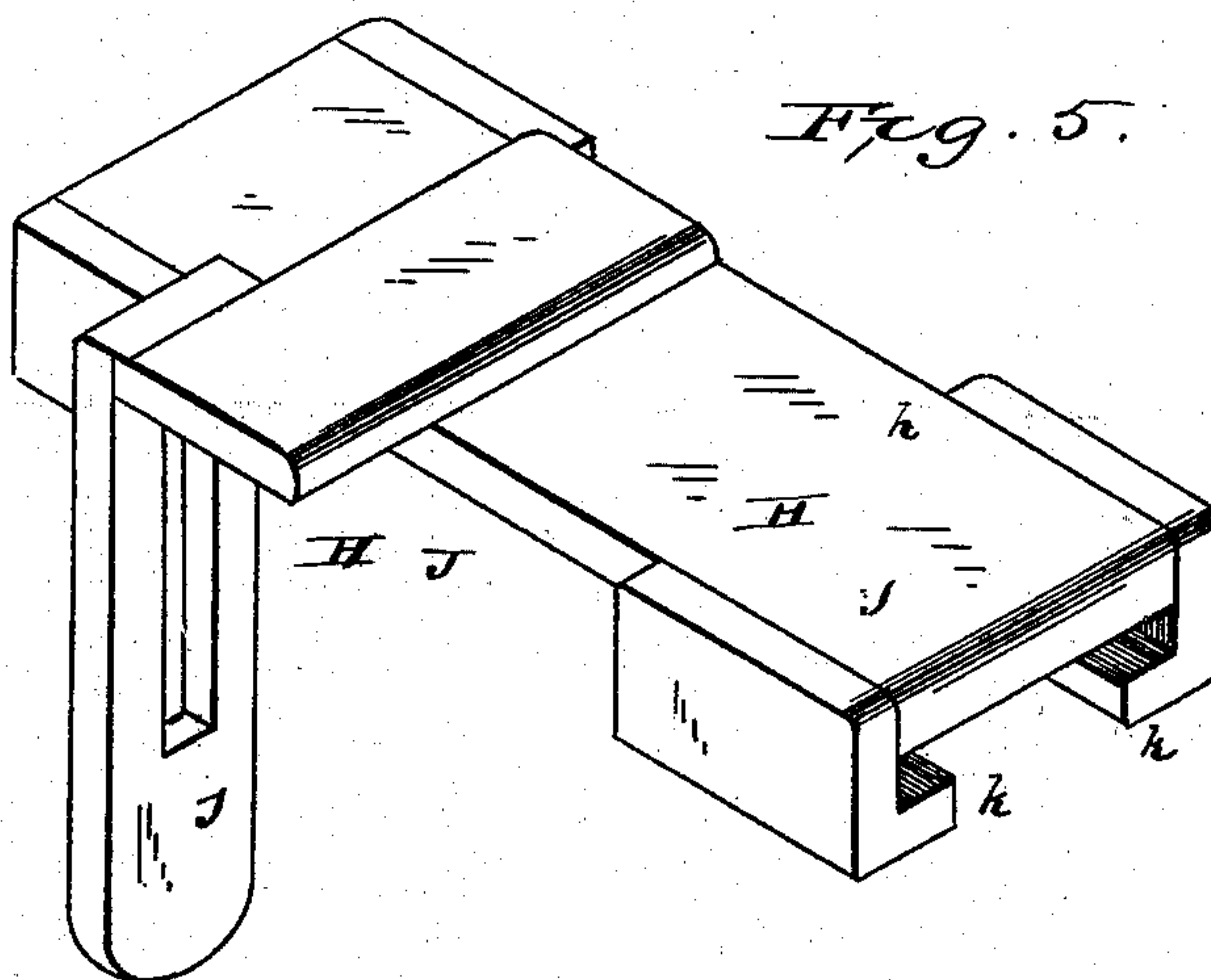
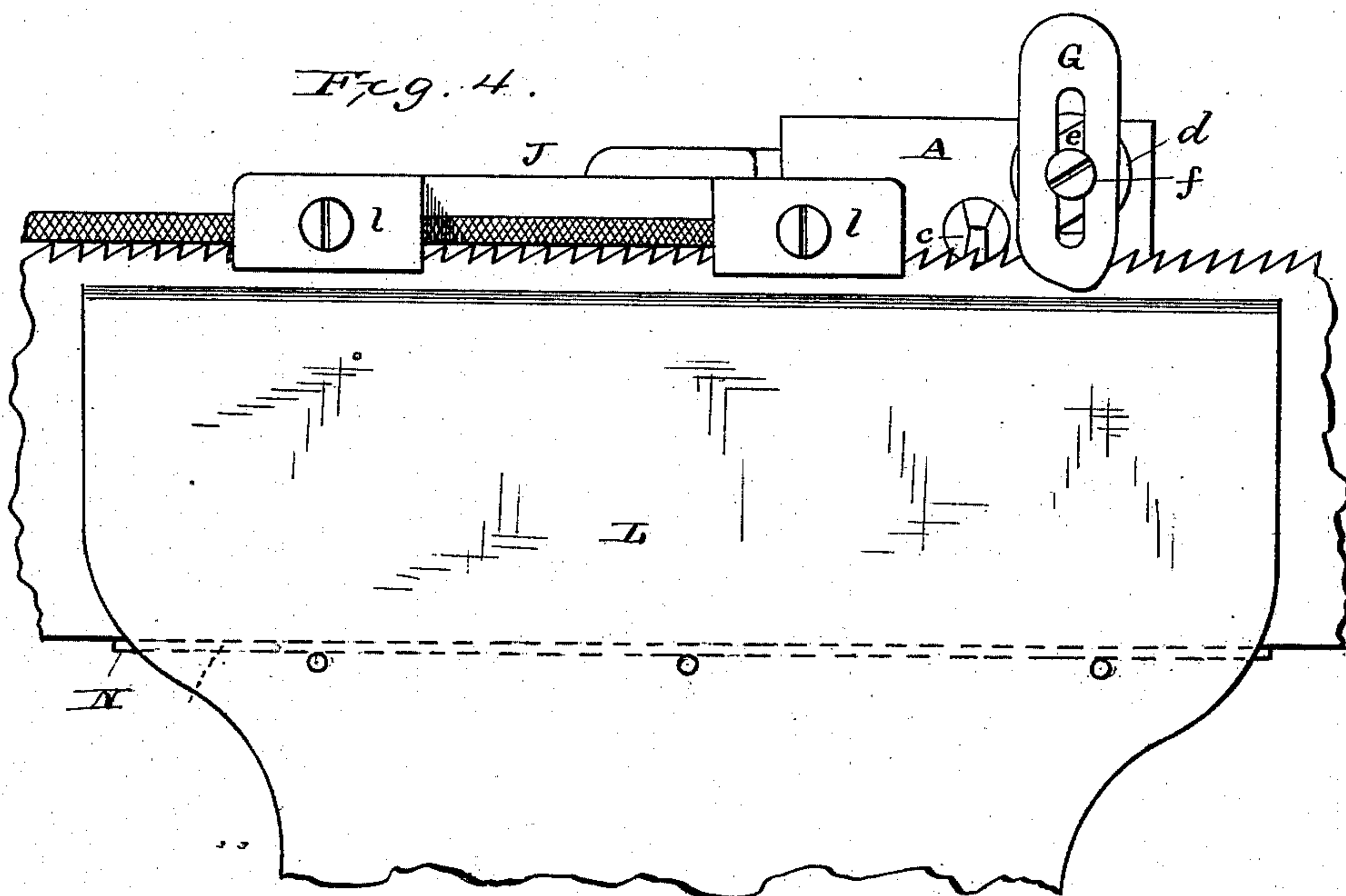
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Witnesses.

Edmund L. Yerville.
J. J. M. Carthy

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By E. M. Alexander
Attorney

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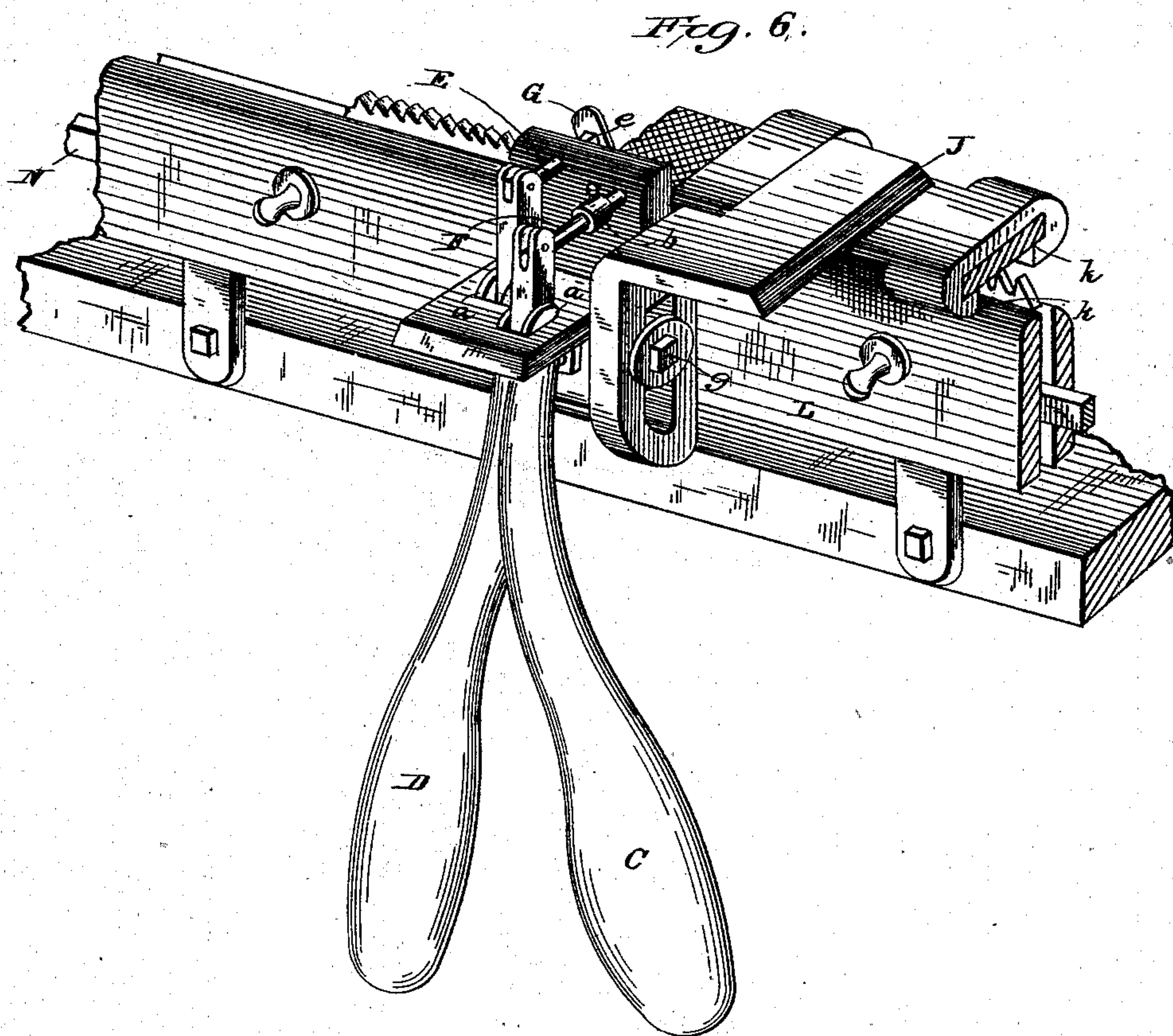
3 Sheets—Sheet 3.

J. W. PUGH.

COMBINED SAW SET AND JOINTER.

No. 274,030.

Patented Mar. 13, 1883.



Witnesses.
Edwin L. Yerville.
Chas. D. Davis.

Inventor.
John W. Pugh.
C. M. Alexander
Attorney.

UNITED STATES PATENT OFFICE.

JOHN W. PUGH, OF GOSHEN, INDIANA, ASSIGNOR OF ONE-FOURTH TO
ALFRED PEW, OF SAME PLACE.

COMBINED SAW SET AND JOINTER.

SPECIFICATION forming part of Letters Patent No. 274,030, dated March 13, 1883.

Application filed June 19, 1882. (Model.)

To all whom it may concern:

Be it known that I, JOHN W. PUGH, of Goshen, in the county of Elkhart, and in the State of Indiana, have invented certain new and useful Improvements in a combined Saw Set and Jointer; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

This invention relates to devices which are designed for evening or jointing the teeth of band saws, and also for setting the teeth of saws; and the nature of my invention consists in the combination, with a bracket and clamp, of a saw-guide, a bearing for the back edge of the saw, and adjustable saw-set; also, in the combination of a file-holder with a saw-set, as will be fully understood from the annexed drawings, when taken in connection with the following description.

In the accompanying drawings, forming a part of this specification, and on which like letters of reference indicate corresponding features, Figure 1 represents an end elevation of my improved device, showing the same as a saw-set, the clamp (to be hereinafter described) for supporting the saw during the operation of setting being in this figure removed; Fig. 2, a front elevation thereof; Fig. 3, a detailed perspective view of a setting-tool; Fig. 4, a side elevation, looking from the rear, showing my device as it appears when used as a combined saw-set and saw-jointer, the saw-guiding bracket being in this instance removed and a file-holder, to be hereinafter more fully specified, substituted in lieu of such bracket; Fig. 5, a detail perspective view of the file-holder; and Fig. 6, a perspective view of my invention when used as described in speaking of Fig. 4—namely, as a combined saw-set and saw-jointer, the saw-clamp being slightly modified in form and being mounted upon a bench.

In the drawings, A designates the vertical portion of a bracket, and B the horizontal part thereof.

C D designate two hand-levers, which pass through the horizontal portion of the bracket,

and are pivoted to ears *a a*, formed thereon. The crooked lever C is pivoted at its upper end to one end of a saw-set bar, E, on which is applied an adjustable collar-stop, *b*. This bar E is free to play through the vertical part A of the bracket, and the protruding end is tapered and beveled at C, as shown in Figs. 1 and 4, for the purpose of giving the proper angular set to the saw-teeth. The straight lever D has a bar, F, pivoted to its upper end, which bar passes freely through the vertical part A of the bracket, and is provided with a collar-stop, *d*, which is adjustable, an enlargement or a rigid shoulder, *e*, and a slotted setting-tool, G, which is endwise adjustable, and which is movable about the set-screw *f*. The object in making the collars *b* and *d* adjustable on their respective shafts is to regulate the throw or movement of the said shafts to suit the degree of angularity to which it may be desired to set the teeth of the saw. The enlargement *e*, being integral with the body of the shaft E, serves to afford additional strength thereto, and an enlarged surface against which the setting-tool G is adapted to be screwed. This setting-tool G is provided at its lower end with an offset or projection, which, when the shaft E is moved in the direction of the arrow, by means of the lever D, serves to set every alternate tooth of the saw in a corresponding direction.

H designates a bracket the shank of which is vertically slotted, and adjustably secured by a set-screw, *g*, to the edge of the vertical part A of the supporting-bracket. The overhanging part *h* of the vertically-adjustable bracket H is grooved to receive the toothed edge of the saw-blade, and to afford a guide for it on its way to the setting devices.

It is important that the teeth of all saws (straight) be evened or jointed, and to the accomplishment of this object I substitute in the place of the bracket H an adjustable file-holder, J, (shown in Figs. 4, 5, and 6,) which consists of a vertical slotted portion, *j*, clamping jaws *k k*, and set-screws *ll*. This device is secured to the main bracket by the set-screw *g* when the bracket H is removed.

In Figs. 4 and 6 the jointer attachment is applied in lieu of the guiding-bracket. The

clamp L is composed of two jaws held and bound together by two or more suitable set-screws. At a proper distance from the upper edge of the clamp and between the two jaws is secured a strip of metal (an old piece of saw-blade being usually employed) slightly thicker than the blade of the saw being set or jointed, the object being to form a support for the back edge of the saw to slide upon, and to prevent the jaws from binding too hard upon the sides of the saw. By this means I am enabled to move the saw, by the band, beneath the face of the jointing-file and across the ends of the setting-tools. In Fig. 6 one of the jaws is provided with short standards, which serve to connect the clamp with the filing-bench or other suitable support.

In setting saws the hand-levers C and D are forced respectively toward and from the operator, the bar or shaft E setting every alternate tooth from him, and tool G on the shaft F setting the intermediate teeth toward him, the blade being moved horizontally at proper intervals. In jointing saws the blade is given a similar movement, and the file being in contact with the extremities of the teeth, a uniformity of length is thus readily and rapidly effected, the file-holder J being in this latter instance substituted and employed in lieu of the saw-guiding bracket H. This description, it is observable, applies to the alternate uses to which I may put my invention—namely, either as a saw-set or as a saw-jointer. It is to be remarked, however, that I have ascertained that it is capable of performing the functions, conjointly, both a saw-set and a saw-jointer, this work or end being accomplished when the machine is setup in the form shown in Fig. 6 of the accompanying drawings, the operation being substantially a union of that above described, and may be stated to be as follows, to wit: The bracket or body A being clamped, bolted, or otherwise securely fastened to one of the jaws of the clamp L, and the file-holder J being applied, as seen in Fig. 6, in lieu of the guiding-bracket H, a saw is placed between the jaws of the clamp and a file in the file-holder. The saw-blade is then moved along between the jaws of the clamp and its teeth evened or jointed by reason of their abrasive contact with the lower face of the file. When the saw reaches a point op-

posite the setting-tools the hand-levers C and D are forced respectively toward and from the operator, the bar or shaft E (setting-tool) setting every alternate tooth from him, and the setting-tool G on the shaft F setting the intermediate teeth toward him.

It is further to be observed that when using my device as saw-set merely, it is bolted or otherwise secured to one of the jaws of the clamp L, as above described, and as seen in Fig. 6; but, as hereinbefore intimated, when so used I prefer to employ the saw-guiding bracket H, since it is peculiarly adapted to guiding the saw, and consequently facilitates the work of setting when that object alone is desired. The retaining-piece G is designed for a set, in combination with the set-bar E, one operating to set a tooth to the right while the other sets the adjacent tooth to the left. By these means it is not required to pass the saw twice through the machine, for in the act of setting one tooth the tooth next to it is set in an opposite direction.

Having described my invention, I claim—

1. The combination, with the bracket A B and the hand-levers pivoted to it, of the setting-bar E, its adjustable collar, the bar F, collar d, adjustable setting-tool, and the adjustable bracket-guide, all substantially in the manner and for the purpose described.

2. In a saw-set, the combination of the supporting-bracket, the oppositely-operating setting-tools, their levers, the saw-guiding bracket, and means for clamping the saw in the manner described, substantially as and for the purposes specified.

3. In a combined saw-set and saw-jointer, the combination, with the supporting-bracket and the oppositely-operated setting-tools, of the file and saw-clamps, constructed substantially as herein described.

4. The combination of a saw-setting device with a saw-jointing device, constructed substantially as herein shown and specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 1st day of May, 1882.

JOHN W. PUGH.

Witnesses:

HARRY C. WILSON,
MERRILL E. WILSON.