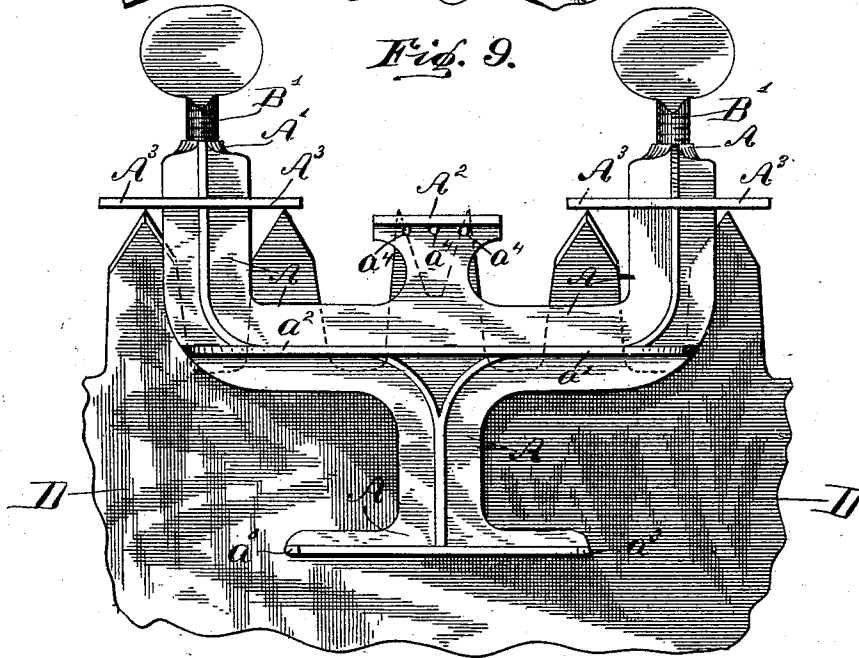
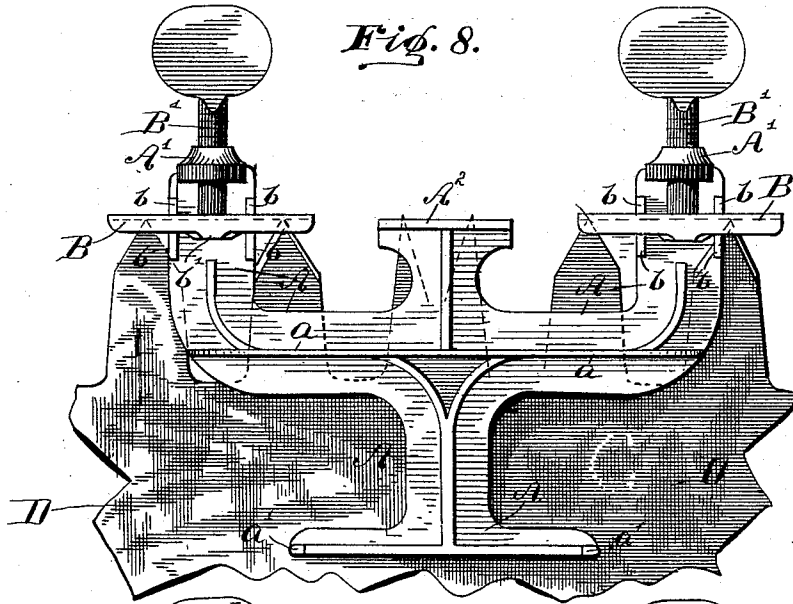


N. H. ROBERTS.
SAW JOINTER AND GAGE.

No. 424,998.

Patented Apr. 8, 1890.



WITNESSES.

C. H. H. Brown,
Witness.

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per *Att. & Bro. Bradford.*
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UNITED STATES PATENT OFFICE.

NATE H. ROBERTS, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO THE E. C. ATKINS & COMPANY, OF SAME PLACE.

SAW JOINTER AND GAGE.

SPECIFICATION forming part of Letters Patent No. 424,998, dated April 8, 1890.

Application filed June 24, 1889. Serial No. 315,317. (No model.)

To all whom it may concern:

Be it known that I, NATE H. ROBERTS, 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 Combined Saw Jointers and Gages, of which the following is a specification.

My said invention relates to that class of tools used in filing and setting saws, whereby the teeth are brought into a uniform condition as to length and set.

Said invention consists in a certain construction and arrangement of parts, 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 perspective view, as seen from the rear side, of my improved tool with a file clamped therein in the position it is used for jointing the points of the teeth; Fig. 2, a front elevation of the same when the file is in position to joint the sides of the tooth-points; Fig. 3, a top or plan view of the same; Fig. 4, a transverse central vertical sectional view of the device when in the condition shown in Fig. 1; Fig. 5, a similar view through one of the clamping-screws and adjacent parts; Fig. 6, a horizontal sectional view through the gage-points; Fig. 7, an under side perspective view of one of the clamp-shoes; Fig. 8, an elevation showing the relation of the device and a fragment of saw-plate in the position it is used as an adjustable gage for jointing the clearing or raking teeth, and Fig. 9 a similar view when used as a fixed gage for the same purpose.

In said drawings the portions marked A represent the main frame of the device; B, the clamp-shoes; C, the file, and D a fragment of a saw-plate in the position said saw-plate occupies when the device is being used to joint the clearing-teeth.

The frame A is cast in the form shown, and is provided upon each side with ribs and points which bear against the surface of the saw when the device is being used. Upon that side which rests against the saw when

the device is used as a jointer there is a rib a and another rib or two points a' , and upon the side which rests against the saw when the device is used as a set there is a rib a^2 and another rib or points a^3 . Overhanging portions A' are provided at the top, which receive the clamp-screws, and against the perpendicular surfaces below said overhanging portions the clamps B rest as they are moved up and down. Centrally at the top this frame has a chilled plate A^2 , which serves as a gage by which the length of raking or clearing teeth (in saws having such teeth) is determined, and also as a central support for the file C when in the position shown in Figs. 1, 4, and 5. This plate is rigidly secured to or forms part of the frame, and is arranged between the clamp-shoes or bearing-surfaces at or near the ends. Upon one side of the frame are formed wings or projecting bearing-surfaces A^3 , the under sides of which are slightly above the upper side of the plate A^2 . These wings and the plate A^2 thus form a means by which the clearing or raking teeth may be jointed off uniformly, in which operation the device is so placed on the saw, as shown in Fig. 9, that the wings will rest on the top or points of the ordinary cutting-teeth, while the plate A^2 comes alongside the clearing or raking teeth, which are filed off until the file comes in contact with the chilled surface of said plate A^2 , and thus said clearing or raking teeth are reduced to a uniform length slightly shorter than that of the cutting-teeth. This arrangement is quite sufficient in dressing saws of a uniform character and which are intended for uniform work. However, it is desirable to produce a tool by which saws can be fitted for varying work or various kinds of saws can be fitted, and I have therefore formed the clamp-shoes B' so that they may be used in place of the wings A^3 , and as said clamp-shoes are adjustable it is obvious that the device may by their use be adjusted to joint these clearing or raking teeth to any desired point. The under sides of said clamp-shoes, while formed with projections, have a portion which is cut away to a flat surface to enable this use to be made of the device, as hereinafter described. Upon the side of the

device which is used as a set are two or more points a^4 , (three are shown,) each of which should be formed of a different length, thus adapting this device for use with saws requiring a different amount of set without changing the device itself.

The clamp-shoes B are secured to the lower ends of clamp-screws B', which are mounted in screw-threaded bearings in the projections A' on the frame. These clamp-shoes have projections b , which rest against the faces of that portion of the frame A adjacent thereto and serve to steady said clamp-shoes in their movement. These clamp-shoes project downwardly farther in the center than at the ends, so as to give narrow bearing-surfaces b' to rest upon the file, permitting said file to be sprung somewhat, when desired, when in the position shown in Fig. 1, in order to accommodate the device to use with saws convex upon their cutting-edge. They are, however, grooved out or reduced to a flat surface at the points where the teeth pass when the device is in the condition shown in Fig. 2, so that the points of the teeth may have a smooth way to pass through during the use of the device when the points of the raking or clearing teeth are being jointed off.

The file C is an ordinary file and needs no further description, and the saw D is an ordinary saw.

As will be observed, my tool can be used for either gaging or jointing saws, and in jointing may be used either for the ends or sides of the points of the teeth, and is also provided with a means for jointing the clearing or raking teeth in such saws as have them, and is capable of being adjusted to either of these uses without the aid of any tool outside itself. It is thus rendered very convenient and efficient, and is much superior to sets of tools including a number of pieces and to those which require separate tools to adjust them.

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

1. In a saw-tool, the combination of the frame A, the two adjustable shoes B, mounted thereon, and a fixed gage or plate A² between them, whereby the length of the raking or clearing teeth can be adjustably determined, substantially as set forth.

2. The combination, in a saw-tool, of the frame, a fixed plate arranged as a gage for the clearing or raking teeth, and two parts secured on said frame, which are adapted to rest upon the points of the other teeth, said

fixed plate being arranged between said parts, substantially as set forth.

3. In a saw-tool, the combination of a central plate forming a gage for the clearing or raking teeth, adjustable plates at the ends upon one side of the device, and fixed plates opposite said adjustable plates, whereby both an adjustable and a fixed gage for said clearing or raking teeth are secured in the same implement, which also utilize the same gage-plate, substantially as set forth.

4. In a saw-jointer, the combination of the frame having projecting portions A', clamp-shoes having projections b , which hold them steady, and screws mounted in said projections A' for operating said clamp-shoes, substantially as shown and described.

5. In a saw-jointer, in combination with the frame and clamp-screws, clamp-shoes having projections in the center which are adapted to rest against the file when the device is used for jointing the cutting-teeth, and ways cut through said projections for the accommodation of the points of the saw-teeth when the device is used for jointing the clearing-teeth, substantially as shown and described.

6. A combined saw jointer and gage provided with bearing-surfaces for resting against the face of the saw, and clamps for holding the file upon one side and bearing-surfaces and two or more gage-points upon the other side, substantially as shown and described.

7. A combined saw jointer and gage having two or more gage-points a^4 of different lengths, substantially as shown and described.

8. A combined saw jointer and gage provided with clamps for holding the file in position to joint either the ends or sides of the points of the teeth, and a gage for the clearing or raking teeth secured upon the frame and arranged between the clamps, substantially as shown and described.

9. The combination, in a saw-jointer, of the frame thereof, a central supporting-point upon which the file rests, and two screw-clamps arranged on the two sides of said point and adapted to bear against the other side of the file when in position, whereby said file may be sprung to position to be used on saws having a convex edge, substantially as set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 19th day of June, A. D. 1889.

NATE H. ROBERTS. [L. s.]

Witnesses:

C. BRADFORD,

E. W. BRADFORD.