No. 816,054. PATENTED MAR. 27, 1906.

F. A. WUEST.

SAW SET.

APPLICATION FILED SEPT. 29, 1905.

2 SHEETS—SHEET 1.

FIG. 2

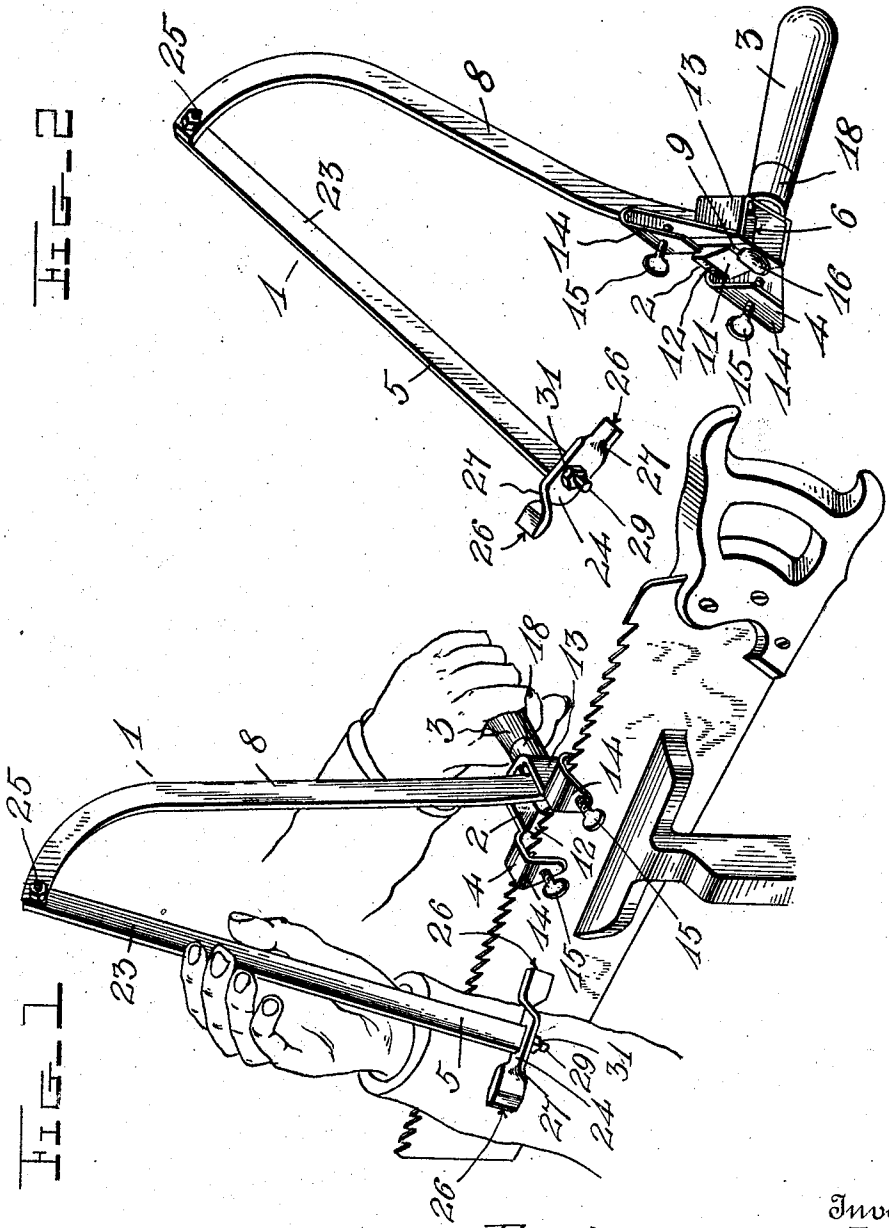

FIG. 1

Witnesses

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2 SHEETS—SHEET 2.

FIG. 4

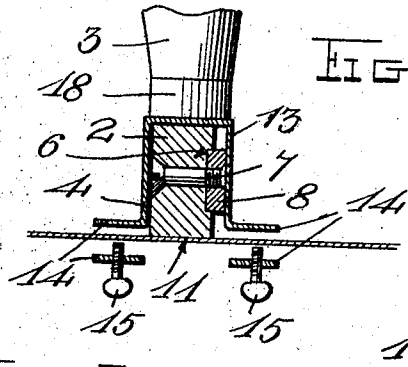

FIG. 6

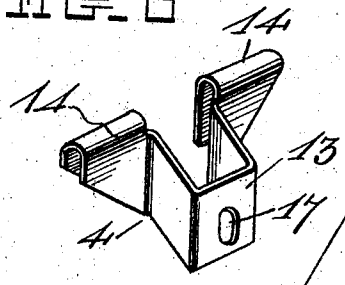

FIG. 5

FIG. 3

Witnesses

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UNITED STATES PATENT OFFICE.

FREDERICK A. WUEST, OF LAWRENCEBURG, INDIANA.

SAW-SET.

No. 816,054. Specification of Letters Patent. Patented March 27, 1906.

Application filed September 29, 1905. Serial No. 280,696.

To all whom it may concern:

Be it known that I, FREDERICK A. WUEST, a citizen of the United States, residing at Lawrenceburg, in the county of Dearborn and State of Indiana, have invented certain new and useful Improvements in Saw-Sets; 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.

My invention relates to improvements in saw-sets; and it consists in the novel construction, combination, and arrangement of devices hereinafter described and claimed.

One object of the invention is to provide a simple and efficient hand-tool by means of which the teeth of a saw will be quickly and accurately set.

Another object of the invention is to provide a saw-setting tool which may be adapted for use on saws of various sizes.

Another object of the invention is to provide a simple, convenient, and efficient device of this character in which the depth and angle of the set may be varied as desired.

A further object of the invention is to improve and simplify the construction and operation of devices of this character, and thereby render the same more durable and efficient in use and less expensive to manufacture.

The above and other objects, which will appear as the nature of my invention is better understood, are accomplished by means of the construction illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view showing the manner in which my improved saw-setting tool is used. Fig. 2 is a perspective view of the under side of the tool, the saw being removed. Fig. 3 is a vertical sectional view. Fig. 4 is a detail transverse sectional view taken on the plane indicated by the line 4 4 in Fig. 3. Fig. 5 is a perspective view of the anvil, and Fig. 6 is a similar view of the saw guide and clamp.

Referring to the drawings by numeral, 1 denotes my improved saw-set which is of the swinging-hammer type and in the form of a hand-tool which may be readily used upon saws of any description when clamped in a vise or otherwise firmly held. The device or tool comprises an anvil 2, a handle 3, a saw clamp and guide 4, and a swinging hammer 5. The anvil 2 is in the form of a metal block, which has formed integral thereon or rigidly secured thereto by being secured in a recess 6 by means of a screw 7 an arm 8, to the upper or outer curved end of which is pivotally connected the hammer 5. The anvil 2 has the recess 6 in one of its side faces, and in its opposite side face is a cavity in which the head of the screw 7 is countersunk. The outer end face of the anvil is cut away to form a transverse shoulder 9, and the upper portion of said end is formed with a die-face 10. The latter consists of two angularly-disposed surfaces 11 12, the larger and lowermost one of which, 11, is adapted to bear against the saw-blade adjacent to its toothed edge, and against the smaller and uppermost face 12 the teeth are adapted to be bent while being set by the hammer 5. The saw-blade is adapted to be held against the portion 11 of the die-face and in the proper position by means of the combined guide and clamp 4, which is here shown as being formed from a single piece of metal by shaping and bending the same to form a three-sided casing 13, which surrounds the inner end of the anvil, and two guiding and clamping jaws 14, which project in opposite directions from the ends of the casing 13 and which are in longitudinal alinement with each other and the die-face 10 of the anvil, so as to receive the toothed edge of the saw-blade within them, as shown. The guiding and clamping jaws 14 are of substantially U form, and in one or both of them I may provide a set-screw 15, which is adapted to govern the pitch of the set of the teeth, as presently explained.

The combined guide and clamp 4 is adjustably secured upon the anvil, so that the clamping and guiding jaws 14 may be adjusted vertically with respect to the die-face 10 so as to permit the use of the tool upon saws having teeth of different sizes. By this adjustment the height or depth of that portion of the tooth which is bent or set may be varied as desired. This adjustment is effected, as shown, by providing a bolt 16 and using the handle 3 as a clamping nut or device for rigidly clamping the combined guide and clamp 4 in an adjusted position upon the anvil. This bolt 16 passes through an opening formed in the lower portion of the anvil and has a portion of its edge cut away or flattened to engage the shoulder 9 on the outer end of the anvil, and thereby prevent the bolt from turning when the handle or clamping device 3 is being turned thereon. Said bolt also passes through a slot or elongated opening 17,

formed in the portion 13 of the combined clamp and guide 4, which portion is disposed between the rear or inner end of the anvil and the ferrule 18 of the handle. The screw-threaded end 19 of the bolt 16 extends through an opening or bore formed in said handle and is engaged with a nut 20, fixed in a tubular socket or enlarged portion 21 of the bore in said handle. The nut 20 is placed in position in the socket 21 through the open outer end of the latter, which after said nut has been secured against rotation is adapted to be closed by a plug 22, as shown. It will be seen that the handle 3 is thus adapted to serve as a clamping-nut which when tightened upon the bolt will clamp the combined guide and clamp 4 firmly in an adjusted position upon the anvil and which when loosened will permit the device 4 to be adjusted vertically upon the anvil, owing to the provision of the slots 17, through which the bolt passes.

The hammer 5 consists of a handle 23 and a head 24. The handle 23 has its upper end pivoted, by means of a threaded bolt 25, upon the upper end of the arm 8. The hammer-head 5, as shown, consists of a plurality of striking-faces 26 and is adjustably secured upon the free end of the handle or lever 23, so that any one of said striking-faces may be brought into an operative position with respect to the die-face on the anvil. As shown, this head 24 is in the form of a strip of metal, which has its ends twisted, as shown at 27, to form two striking-faces 26 at its ends. These faces are of different widths, so that the tool will be adapted for use upon saws having teeth of different sizes or widths. The head 24 is adjustably secured upon the handle 23 by forming the latter with a reduced flattened end 29, which is adapted to pass through a substantially rectangular-shaped opening 30, formed in said head, and which is screw-threaded to receive a clamping-nut 31.

The operation and advantages of the device will be readily seen upon reference to Fig. 1 of the drawings. It will be noted that by inserting the saw-blade between the die-face of the anvil and the set-screws 15 in the guiding and clamping jaws 14, and pressing upwardly upon the handle 3, which is preferably grasped in the left hand, the saw-blade will be held firmly upon the anvil, so that when the hammer is swung downwardly by the right hand, so as to cause one of its striking ends to bend one of the saw-teeth, said tooth will be bent over upon the upper portion 12 of said die-face. It will be seen that by adjusting the set-screws 15 the angle or pitch of the set given to the saw-teeth may be varied as desired and that by adjusting the combined guide and clamp 4 vertically upon the anvil the length or depth of the bent portion of the teeth may be varied as desired. By adjusting the head 24 upon the handle 23 of the hammer either its broad or narrow striking-face 26 may be brought into an operative position, according to the size and width of the saw-teeth to be set.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

The herein-described saw-set comprising the anvil-block having the shoulder on one side provided with the angularly-disposed faces 11, 12, the arm 8 having its inner end secured to the anvil-block, the guide forming the three-sided casing in which the anvil-block is placed, and having the guide-arms 14 extending from opposite sides of the anvil-shoulders, the set-screws carried by the said arms, the handle having one end opposed to the rear side of the anvil-block, said handle and guide being secured to the anvil-block and said handle being at substantially right angles to the arm 8, and the hammer having its handle pivoted to the outer end of said arm, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FREDERICK A. WUEST.

Witnesses:
JOHN FITZPATRICK,
GEO. FEDERLE.