

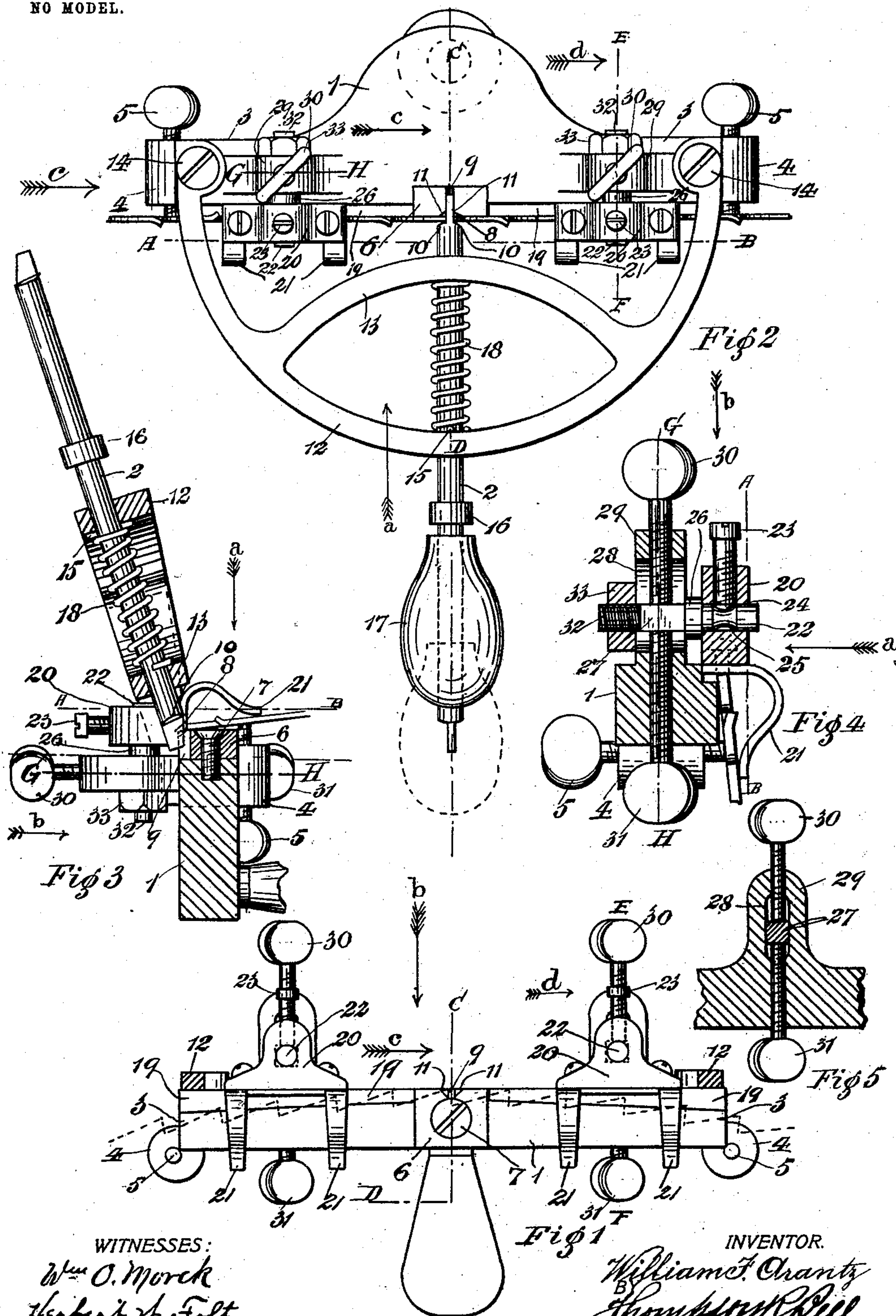
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PATENTED JAN. 19, 1904.

W. F. ARANTZ.  
SAW SETTING DEVICE.

APPLICATION FILED MAR. 21, 1902.

NO MODEL.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

WILLIAM F. ARANTZ, OF INDIANAPOLIS, INDIANA.

## SAW-SETTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 750,148, dated January 19, 1904.

Application filed March 21, 1902. Serial No. 99,239. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM F. ARANTZ, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented new and useful Improvements in Saw-Setting Devices, of which the following is a specification.

My invention relates to certain new and useful improvements in a device or tool for setting saws, and is particularly applicable for use in connection with veneer-saws, and will be hereinafter more fully set forth, and particularly pointed out in the claims.

The object of my invention is to provide a portable tool for setting saw-teeth and that may be applied with equal facility to either band-saws or circular saws of any diameter to uniformly set the teeth of same without removing the saws from their mill or mandrel. I attain these objects by means of my invention of a saw-set tool illustrated in the accompanying drawings, in which similar numerals of reference designate like parts throughout the several views.

Figure 1 is a front sectional elevational view of the saw-set tool, taken through the line A B (see Fig. 2) and looking in the direction of the arrow *a*. (See Figs. 2, 3, and 4.) Fig. 2 is a plan view of the same looking in the direction of the arrow *b*. (See Figs. 1, 3, and 4.) Fig. 3 is a detail sectional view of the same and taken through the line C D (see Figs. 1 and 2) and looking in the direction of the arrow *c*. (See Figs. 1 and 2.) Fig. 4 is an enlarged detail sectional view of the same, taken through the line E F (see also Figs. 1 and 2) and looking in the direction of the arrow *d*; and Fig. 5 is a broken detail sectional view of the end of the anvil and showing the saddle-stud-supporting lug and taken through the line G H. (See Figs. 2, 3, and 4.)

The anvil 1 of the device is preferably made massive at its central portion to absorb the vibration and shock resulting from the hammer-blows applied to the tool 2, and the said anvil has its ends terminating in the reduced portion 3, on the bottom ends of which are formed the bosses 4, through which latter the thumb set-screws 5 are screwed and by means of which latter the angle of the saw to be oper-

ated upon relatively to the face of the anvil may be adjusted. The central portion of the face of the anvil is recessed to receive the former or die 6, and the latter is secured in position therein by the countersunk headed screw 7.

The forming or setting tool 2 is reduced at its operating or setting end to form a flat tongue 8, the two parallel faces of which accurately but freely fit into the slot 9, formed in the die-piece 6. The shoulders 10 of the set-tool 2 are inclined an amount corresponding with the required set to be imparted to the points of the teeth of the saw, and the corners 11 of the die 6, situated on each side of the slot 9 thereof, are tapered, so that said tapered surfaces are parallel with the tapered shoulders 10 of the set-tool 2. A guide or tool-supporting yoke 12, having the cross-bar 13, is secured at its ends by suitable screws 14 to the reduced or end portions 3 of the anvil 1 and at an angle with the face of the anvil 1 to maintain the set-tool 2 at its proper angle with the face of the die 6. The guide-yoke 12 and the cross-bar 13 are drilled, as shown in Figs. 2 and 3, to receive and form guiding-ways for the set-tool 2, and the latter tool is adapted to freely but accurately work or slide longitudinally in said drilled guiding-way, which amount of play is limited by the depth of the slot 9 in one direction and the stop-pin 15 in the other direction. A collar 16 is formed integral on the set-tool 2 at a point intermediate the ends thereof, and a hammer 17 is drilled centrally and longitudinally to freely work or slide on the projecting outer end of the set-tool 2, and by sliding the latter rapidly on said projecting end of said tool 2 toward the collar 16 thereof to strike the latter a sharp quick blow one of the shoulders 10—namely, that which contacts with the saw-tooth of the set-tool 2—is quickly forced against the saw-tooth to press the latter against the inclined corner of the anvil-die to impart the required set to said tooth. A suitable coil-spring 18 encircles that portion of the set-tool 2 between the cross-bar 13 and the yoke 12 and has one of its ends bearing against said cross-bar 13 and its opposite end bearing against the stop-pin



15, and the said spring is provided for the purpose of returning said set-tool to its normal position away from the saw-teeth. A portion of the face of the anvil 1 at the top edge thereof is cut away on each side of the die 6 to form the longitudinally-extending recesses 19, and the said recesses are provided for the purpose of forming clearance spaces or ways to prevent the sharp set points of the teeth of the saw contacting with and rubbing against the face of the anvil. The supporting and guide saddles 20 are provided with the retaining-fingers 21, the depending ends of which are adapted to contact with the side of the saw to retain said saddles in position on the edge of the latter, and the said saddles are mounted on the studs 22 to swing thereon to adjust the bottom faces to the peripheries of the different diameters of saws to which the setting-tool may be applied. The saddles 20 are retained in position on the studs 22 by the set-screws 23, which are screwed into the saddles at their central portions, and said screws have their ends 24 rounded to fit the semicircular grooves 25, formed in each of said studs 22. The studs 22 have their collars 26 formed intermediate their ends—that is, between the saddle-bearing portions thereof and the square portions 27—which latter fit in the vertical ways or slots 28 of the lugs 29, which latter are formed integral on the top sides of the reduced ends of the anvil, and the positions of the said studs are adjusted and maintained by the thumb adjusting-screws 30 and the bottom thumb adjusting-screws 31. The inner ends 32 of the studs 22 are threaded to receive the securing-nuts 33, and by the latter said studs are securely held in their adjusted positions.

The manner of using my invention I will now proceed to describe. The device or tool is placed on the saw to be operated upon in position thereon so that the tops of the teeth or peripheral edge of the saw-teeth will contact with each of the bearing-faces of the saddles 20, as illustrated particularly in Figs. 1 and 2. The teeth of the saw to be set or reset are brought into position relatively to the anvil 1 and the shoulders 10 of the set-tool 2, as indicated in Fig. 2, to set the points of the alternate teeth at one side or plane of the saw. To set the points of the teeth, the hammer 17 is moved backwardly into the position indicated by the dotted lines in Fig. 2, and said hammer is caused by a sharp quick movement to strike the collar 16 to impart the necessary force to said tool 2 to force the shoulder 10 of the latter to bend or set the points or edges of the saw-teeth into the recess 11 to conform with the slope or inclination thereof, and thereby impart the required set thereto, and thus each of the alternate teeth are set or bent to one side of the saw, after which operation the tool is reversed upon the saw to set the remaining alternate

unset teeth to the opposite side or plane of the saw in a similar manner.

Having thus fully described this my invention, what I claim as new and useful, and desire to cover by Letters Patent of the United States therefor, is—

1. In a saw-set, the combination with a forming-die provided with a slot terminating in diverging forming planes, of a forming-tool arranged opposite said die, a tongue formed on said tool working in said slot, means for supporting the device on the work, means for presenting the tool to the die at an incline, and means sliding on said tool for imparting a blow thereto, substantially as described.

2. In a saw-set, the combination with a forming-die provided with a slot, of a forming-tool arranged opposite said slot, having a tongue working in said slot, means for reciprocating said tool, and a pair of pivoted saddles for holding the device on the saw-blade, substantially as described.

3. In a saw-set, the combination with an anvil, a die carried thereby, and a forming-tool working against the die, of pivoted supporting means upon the anvil, means for vertically adjusting the supporting means, and means for adjusting the supporting means to conform to the line of saw-teeth, substantially as described.

4. In a saw-set, an anvil, a forming-die carried by the anvil and having a slot terminating at its forward end in diverging forming planes, a forming-tool supported opposite the die, having a tongue formed on the tool constantly operating within the slot, and shoulders on the tool parallel with the said planes, means for forcing the tool against the die, and means for returning the tool to its normal position, substantially as described.

5. In a saw-set, an anvil, a die having a slot terminating in forwardly-disposed diverging forming planes, a forming-tool arranged opposite the die, having a tongue formed on the said tool and constantly operating within the slot, and shoulders on the tool parallel to the forming planes, means for supporting the set on the saw-teeth between the die and the shoulders and slidable means on the tool for moving the same forward to cause the teeth to be forced by the shoulders against the forming planes, substantially as described.

6. In a saw-set, the combination with an anvil, a die situated centrally on the face of said anvil and provided with a central slot extending at right angles with the face of said die and inclined on angled planes on each side of said slot, supporting and guiding means on the ends of said anvil whereby the latter is held in position on saws of different diameters, of a setting-tool provided with a flattened end portion or tongue adapted to fit in said die-slot, said setting-tool provided with side setting-shoulders situated on either side of the said tongue of said tool and having their sur-



faces parallel with the surfaces of the inclined setting planes of said die, and means for guiding said tool and supporting the latter in position relatively to the die.

5 7. In a saw-set, the combination with an anvil, a forming-die situated centrally on said anvil and a forming or setting tool supported in an inclined position opposite said forming-die, of supporting and guiding means situated at  
10 or near the ends of said anvil, and means

whereby the angle of the face of the anvil may be adjusted relatively to the plane or side of the saw.

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

WILLIAM F. ARANTZ.

Witnesses:

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W. L. BUSHONG.