

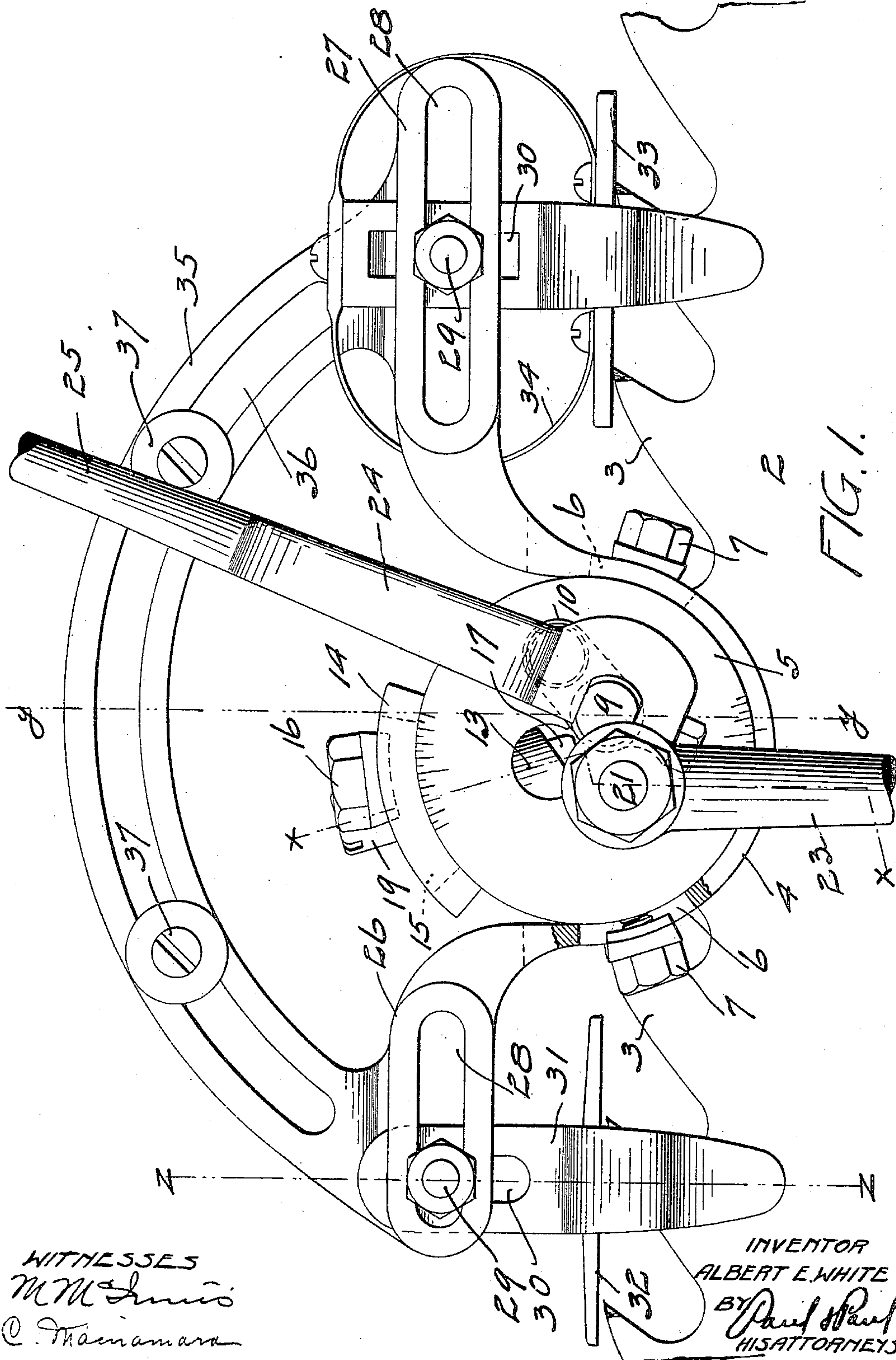
No. 816,695.

PATENTED APR. 3, 1906.

A. E. WHITE.
SAW SWAGE.

APPLICATION FILED OCT. 22, 1904.

2 SHEETS—SHEET 1.



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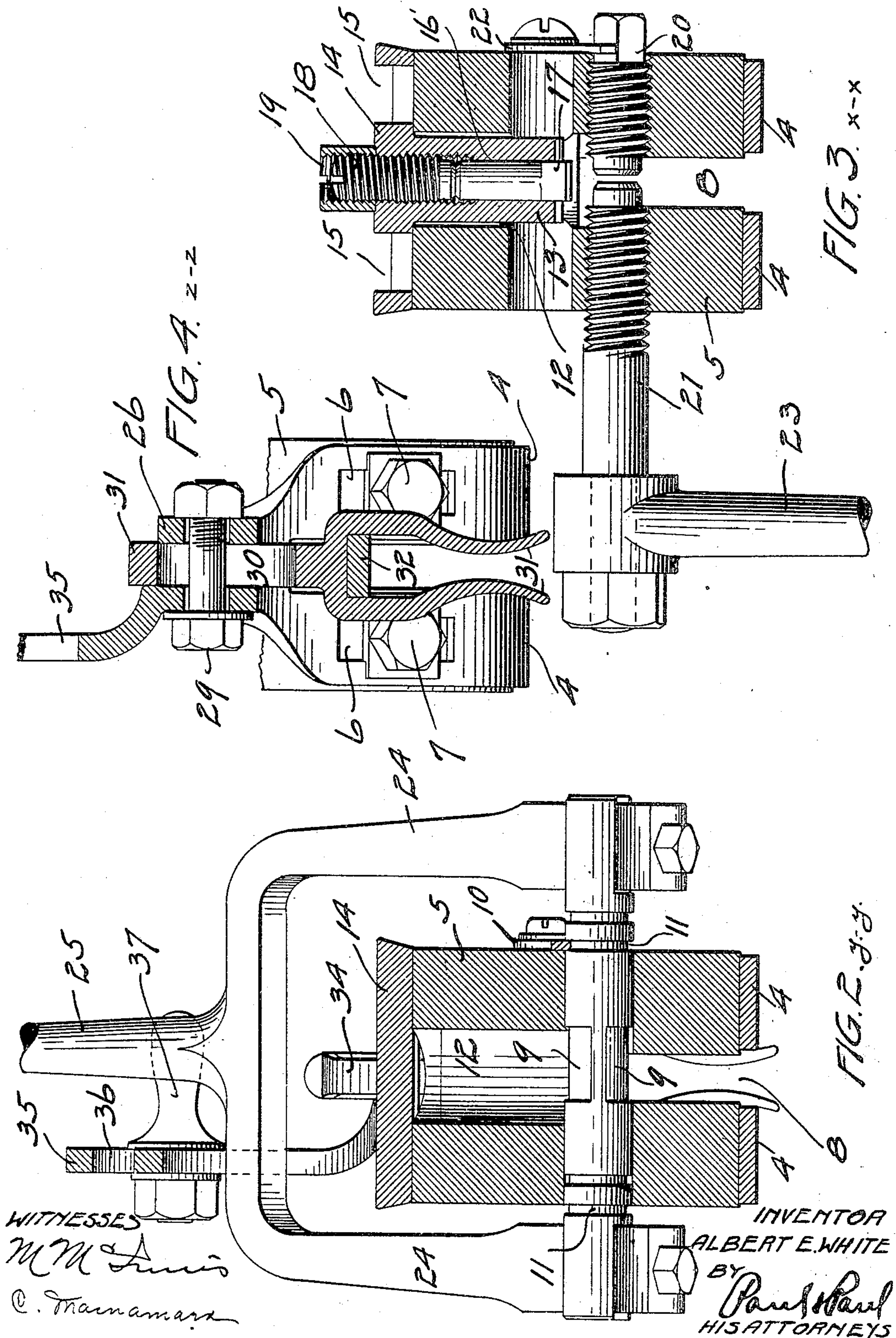
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UNITED STATES PATENT OFFICE.

ALBERT E. WHITE, OF EAU CLAIRE, WISCONSIN.

SAW-SWAGE.

No. 816,695.

Specification of Letters Patent.

Patented April 3, 1906.

Application filed October 22, 1904. Serial No. 229,560.

To all whom it may concern:

Be it known that I, ALBERT E. WHITE, of Eau Claire, Eau Claire county, Wisconsin, have invented certain new and useful Improvements in Saw-Swages, of which the following is a specification.

My invention relates to devices for swaging the teeth of band, gang, and circular saws and is designed as an improvement over the swage device shown and described in Letters Patent of the United States No. 587,539, issued to me August 3, 1897.

The invention consists generally in providing a frame wherein the die-carrying block is adjustably supported.

Further, the invention consists in an arched slotted bar extending over said block and provided with adjustable pins for regulating the movement of the die-operating lever.

Further, the invention consists in providing a die-operating lever that is connected to both ends of the die and is provided with a handle that operates centrally with respect to the die and in the plane of the saw-teeth.

Further, the invention consists in providing adjustable arms at each end of the frame adapted to straddle the teeth of the saw.

Further, the invention consists in various constructions and combinations, all as hereinafter described, and particularly pointed out in the claims.

In the drawings, Figure 1 is a side elevation showing my improved saw-swage applied to the teeth of the saw. Fig. 2 is a vertical section on the line *y y* of Fig. 1. Fig. 3 is a similar view on the line *x x* of Fig. 1. Fig. 4 is a section on the line *z z* of Fig. 1.

In the drawings, 2 represents a saw having teeth 3 to be swaged, and 4 a semicircular band forming the middle portion of the swage-frame and supporting a cylindrical block or head 5. The band 4 is provided with slots 6 to receive clamping-screws 7, by means of which the block 5 is held in place in the frame and rendered adjustable to raise or lower the die to vary its position with respect to the work according to the shape of the teeth or the character of the saw upon which the tool is used. The block 5 is provided with a centrally-arranged slot 8 to receive the teeth of the saw to be swaged, and a die 9 is mounted in said block transversely with respect to said slot and is capable of various adjustments, as described in my former pat-

ent, above referred to, being locked in its different positions by means of the plate 10 and the annular grooves 11. Above the die is a vertical slot 12, extending out through the wall of the block 5, and fitting within said slot is a stud 13, depending from a curved plate 14, that fits upon the upper surface of the block and is adjustable thereon by means of slots 15 and screws 16, the stud 13 sliding in slot 12 to accommodate itself to the various positions of the plate 14. The stud 13 has a socket 16 extending lengthwise through the same, the inner end of which socket has smooth walls and carries an anvil 17, the outer end being threaded to receive an exteriorly-threaded plug 18, that engages the end of the anvil to force it down upon the saw-tooth and is locked in its different positions by means of the nut 19.

The anvil and the manner of supporting and operating the same corresponds substantially to the one in my patent above referred to.

20 and 21 are screws mounted in the wall of the block 5 and having inner ends adapted to bear upon the opposite sides of the saw and clamp the tool firmly thereon. The screw 20 is prevented from accidental movement by means of a forked plate 22, mounted on the block 5 and engaging the squared end of the screw. The opposite screw 21 is provided with an operating-handle 23.

The parts heretofore described, with the exception of the semicircular portion of the frame in which the block 5 is mounted, are substantially the same as those shown and described in my Letters Patent referred to herein, and I will now proceed to describe specifically the improvements which I have incorporated in the tool and upon which I make my claims.

The ends of the die 9 extend out beyond the block 5 on each side and are preferably flattened, as shown, to receive the ends 24 of a forked die-operating lever 25. This lever, as shown in Fig. 2, straddles the block in which the die is mounted, and the handle portion is directly above the center of the die in the plane of the saw-teeth. This construction insures a uniform application of the power throughout the entire length of the die, prevents uneven swaging of the teeth, and unequal wear of the die and block. It also renders the tool easier for the operator to manipulate, as the force is applied directly above the saw-teeth instead of at the side of the

saw, and the tendency to disturb the adjustment of the tool on the saw incident to the use of the side lever is avoided.

At each end of the tool brackets 26 and 27 are provided integral with the ends of the band 4 and having horizontal slots 28 to receive bolts 29, that pass through vertical slots 30 in forked arms 31, that are adapted to straddle the saw-teeth upon each side of the operating-die. These forked arms by reason of the slots are vertically and horizontally adjustable to adapt the tool for use on saws where there is variation in the distance between the teeth and permit the ready and convenient application of the tool to any saw. One of the forked arms is provided with a fixed plate 32, secured in the crotch of the fork out of contact with the saw-teeth to prevent the swage from tipping back and allowing it to be slipped from tooth to tooth without removing the hands from the levers, thus making the movement of the swage rapid and easy to accomplish. The other arm has a plate 33, carried by the ends of a bow-shaped spring 34, that is secured at its middle point to the top of the arm. This spring holds the plate 33 down upon the ends of the teeth with a yielding pressure and allows it to yield when the die-operating lever is thrown over to that end of the tool. This movement of the plate 33 allows the block to tip forward and draws the teeth to the desired position for dressing.

It is desirable in a device of this kind to provide means for regulating the throw or travel of the die-operating lever, and I therefore provide an arched or curved bar 35 extending over the die-block from side to side, preferably integral with the frame, and having a slot 36, wherein stop-pins 37 are adjustably secured upon each side and in the path of the handle portion of the die-operating lever. By adjusting these stop-pins back and forth the operator can easily regulate the throw of the lever in both directions, and the tool having been clamped on a saw and the stop-pins adjusted the lever will move a corresponding distance with each operation, and a uniform swaging of the teeth will result.

I claim as my invention—

1. In a saw-swaging tool, the combination with a cylindrical head or block having a slot

to receive the saw-teeth, of a band having upwardly-turned ends terminating in horizontal extensions, and a downwardly-curved semicircular middle portion intermediate to said ends, said block being mounted above and in said semicircular portion, means carried by the ends of said band to straddle the saw-teeth and rest thereon, a swaging-die and an operating-lever secured to said die and an arched band connecting the ends of said first-named band and bracing the middle section thereof and having stops in the path of said lever, substantially as described.

2. In a saw-swaging tool, the combination, with a cylindrical head or block having a slot to receive the saw-teeth, of a semicircular band having ends provided with means to rest upon the saw and in which band said block is supported, a swaging-die mounted in said block, an operating-lever having a forked lower end adapted to straddle said block and secured to the ends of said die, the handle portion of said lever being above the middle of the die and in the vertical plane of said slot, and an arched longitudinally-slotted bar mounted on said band above said block and provided with stops adjustably supported in said slot in the path of said lever, substantially as described.

3. In a saw-swaging tool, the combination, with a frame having a bracket provided with a longitudinal slot, of an arm having a vertical slot, a bolt passing through said slot and securing said arm and bracket together, the lower end of said arm being forked, and a plate provided in the crotch of said fork, and a spring yieldingly connecting said arm and said plate.

4. In a saw-swaging tool, the combination, with a frame, of an arm mounted thereon and having a forked lower end to straddle the teeth of the saw, a plate provided in said fork to rest upon the saw-teeth, and a spring having its middle portion secured to said arm and its ends supporting said plate, substantially as described.

In witness whereof I have hereunto set my hand this 17th day of October, 1904.

ALBERT E. WHITE.

Witnesses:

GEORGE C. TEALL,
MARGARET RIPLEY.