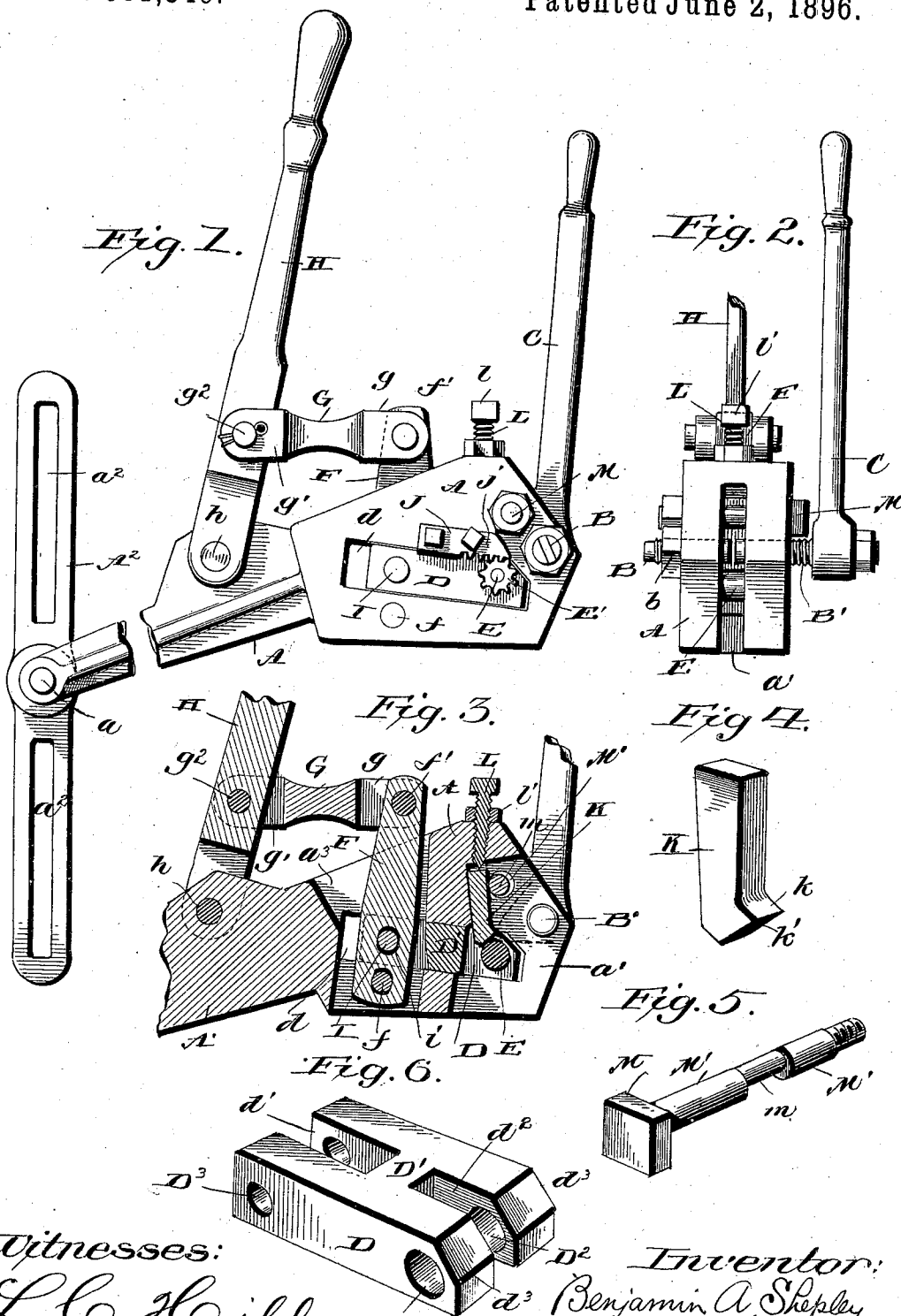


(No Model.)

B. A. SHEPLEY.
SAW SWAGING MACHINE.

No. 561,349.

Patented June 2, 1896.



Witnesses:

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UNITED STATES PATENT OFFICE.

BENJAMIN A. SHEPLEY, OF TIMPSON, TEXAS.

SAW-SWAGING MACHINE.

SPECIFICATION forming part of Letters Patent No. 561,349, dated June 2, 1896.

Application filed August 19, 1895. Serial No. 559,820. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN A. SHEPLEY, a citizen of the United States, residing at Timpson, in the county of Shelby and State of Texas, have invented certain new and useful Improvements in Saw-Swaging Machines; 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in saw-swaging machines of that class in which are employed an anvil-die and an independent roller-die, having for its object, among others, the provision of a simple and cheap device or machine of this character by means of which the saw may be swaged from the front of the tooth without scalloping or concaving the tooth and at the same time avoiding friction thereon. I employ novel means for giving motion to the carrier in which the roller-die is mounted as well as for rotating said die.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the appended claims.

The invention in this instance resides in the peculiar combinations and in the novel construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the accompanying drawings, and then particularly pointed out in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a side elevation of my improved saw-swaging machine with the attaching-arm broken off. Fig. 2 is an end elevation thereof with a portion broken away. Fig. 3 is a substantially central vertical longitudinal section through the machine. Fig. 4 is a perspective view of the anvil-die removed from the machine. Fig. 5 is a perspective view of the roller-die removed from its carrier, which latter is also shown in perspective in Fig. 6.

Like letters of reference indicate the same parts throughout the several views.

Reference now being had to the details of the drawings by letter, A designates the body portion of the device, from one end of which extends a shank or arm A', in the outer end of which is swiveled, as upon a swivel *a*, a clamp-arm A², having longitudinal slots *a*² for the reception of lag-screws or other means by which the device may be secured on the edge of the filing-bench. Of course it will be understood that in practice this securing-arm A² will extend horizontally instead of vertically, as illustrated in Fig. 1, in which position it is shown for convenience. This body portion A is provided at its front end—that is, the one opposite that from which the arm A' extends—with a vertical recess *a'* for the reception of the tooth of the saw, and B is a bolt mounted in one of the jaws thus formed and provided with a nut *b*, while mounted in the opposite jaw, diametrically opposite thereto, is a bolt B', to which is fast a lever C, having a suitable handle, and so mounted that by manipulation of the handle the bolt B' may be turned so as to clamp the saw between the inner end thereof and the adjacent end of the bolt B. This bolt has a quick screw, so that slight movement of the handle or lever will be sufficient to clamp or loosen the saw. The opposite walls of the body-piece are also formed with the longitudinal slots or recesses *d*, in which is mounted to slide the carrier D, which consists, as seen best in Fig. 6, of the two substantially parallel side portions connected substantially centrally by the cross-bar D', forming a longitudinal slot *d'* upon one side of said cross-piece and another longitudinal slot *d*² upon the opposite side thereof, all as clearly shown in Fig. 6. The front ends of these side bars are beveled, as seen at *d*³, and are provided with the transverse hole D², while the opposite ends of these side bars are provided with the transverse opening D³.

In the opening D² in the front end of the carrier and presser-block D is loosely mounted for rotation a roller-die E, carrying upon its outer end a pinion E', as seen best in Fig. 1. The rear end of the body portion A is formed with a vertical recess *a*³, in which works the vertically-disposed lever F, the lower end of which is pivotally mounted on a bolt *f*, held

in the side walls of the body portion and at its upper end supporting a pivot-pin f' , upon which is mounted the bifurcated end g of a link G , the other end of which is also bifurcated, as shown at g' , and is pivotally connected by a pivot g^2 with the operating-lever H , which is pivotally mounted, as at h , on the arm A' , extending from the body portion A . The lever F is connected with the carrier or presser-block D by means of a pin I , mounted on the rear end of the block and working through an elongated opening i in the lever, which allows sufficient lost play to avoid injury to any of the parts during the operation of the machine.

Secured to the outer face of the body portion A is a bar J , toothed upon its under side, as shown at j in Fig. 1, and adapted to be engaged by the pinion E' as the carrier or presser-block is moved and thus rotate the shaft E , which constitutes the roller-die.

K is the anvil-die, mounted in the vertical recess in the front portion of the body A . It is shaped as shown in Figs. 3 and 4, its lower end being beveled, as seen at k' , and its upper face is practically flat, and a screw L is tapped through the top of the body portion A and bears against the upper end of said die, as seen clearly in Fig. 3. The said screw is provided with a suitable head l , and a jam-nut l' is provided, as seen in Figs. 1, 2, and 3, to bind the same in its adjusted position.

M is a bolt mounted in the upper portion of the body A and provided with the eccentric portions M' , between which is the recess or groove m , as best seen in Fig. 5. The upper end of the anvil-die K rests in this groove and by rotation of the bolt the said die is moved so as to change the position of the bevel at its lower end in accordance with the character of the tooth to be operated upon.

The operation is simple and will be readily understood from the above explanation, especially when taken in connection with the annexed drawings, and a further detailed description thereof is not deemed necessary.

It seems sufficient to state that the anvil-die K is held fast between the eccentric-bolt and the wall of the body portion against which it bears, as seen in Fig. 3, and is thus held against dropping down. The roller-die is

pushed forward to the limit of the stroke of the block or carrier D .

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

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

1. The combination of the body portion, the slidably-mounted presser-block, the rotatable roller-die mounted therein, the anvil-die and the eccentric-bolt bearing against said anvil-die for holding it and adjusting its position, substantially as described.

2. The combination of the body portion, the sliding presser-block and its actuating means, the roller-die mounted therein, the pinion on the end thereof and the toothed plate on the body portion meshing with said pinion, and the anvil-die disposed vertically with its acting face in proximity to the roller-die, substantially as described.

3. The combination of the body portion, the sliding presser-block, the rotatable roller-die mounted therein, the anvil-die, the eccentric-bolt and the vertically-adjustable bolt bearing on the anvil-die, substantially as described.

4. The combination of the body portion, the sliding presser-block and its actuating means, the roller-die mounted therein, the pinion on the end thereof, the toothed plate on the body portion meshing with said pinion and the adjustable anvil-die cooperating with the roller-die, and the horizontally-disposed eccentric-bolt acting against said anvil-die, substantially as described.

5. In a saw-swaging device, a presser-block in a single piece having parallel portions separated and connected by a cross-piece, the said parallel portions being beveled at their forward ends and provided at their front and rear ends with transverse holes, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

BENJAMIN A. SHEPLEY.

Witnesses:

D. S. MCCRIMMON,
F. MCDEARD.