

(No Model.)

J. R. KIRKPATRICK.
SAW SWAGE.

No. 499,295.

Patented June 13, 1893.

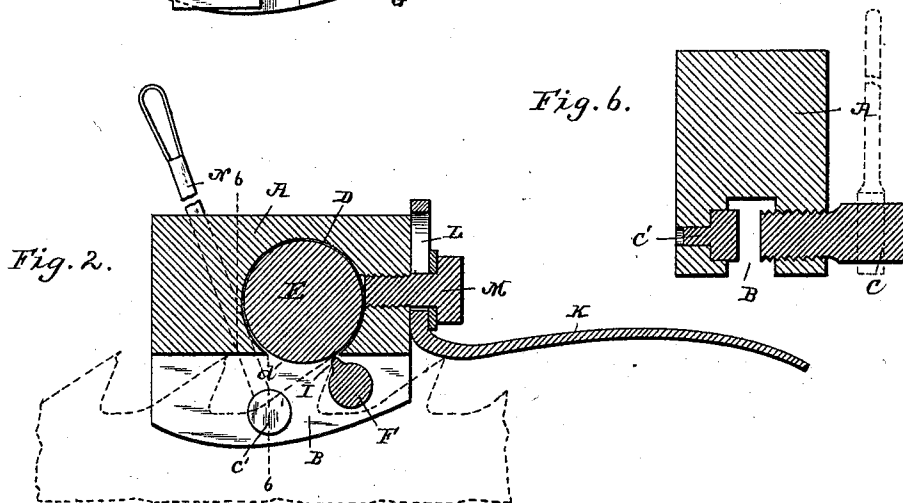
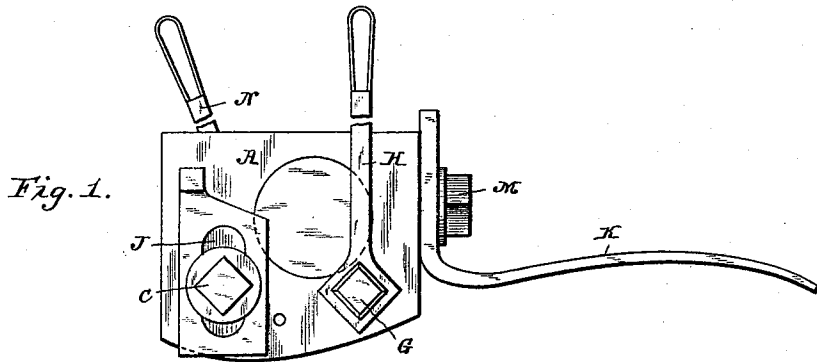


Fig. 6.

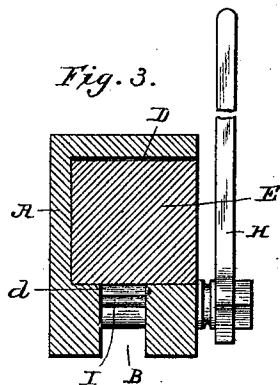
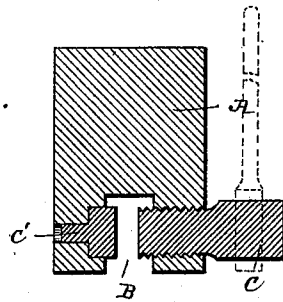


Fig. 4.

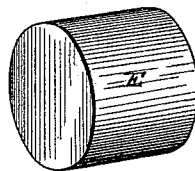
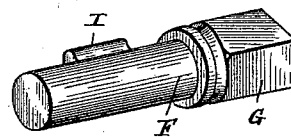


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN R. KIRKPATRICK, OF KENDALLVILLE, INDIANA.

SAW-SWAGE.

SPECIFICATION forming part of Letters Patent No. 499,295, dated June 13, 1893.

Application filed July 9, 1892. Serial No. 439,492. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. KIRKPATRICK, a citizen of the United States, residing at Kendallville, in the county of Noble and State of Indiana, have invented a new and useful Saw-Swage, of which the following is a specification.

This invention relates to saw-swages; and it has for its object to provide an improved swaging device for saws, which contemplates a simple and inexpensive device which not only secures the same results as similar devices, but also provides means for drawing out the tooth from both edges thereof so that a thinner and longer cutting edge for the saw will be provided.

To this end the invention is primarily designed to generally improve upon hand swaging devices.

With these and many other objects in view which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

In the accompanying drawings:—Figure 1 is a side elevation of a saw swage constructed in accordance with this invention. Fig. 2 is a vertical longitudinal sectional view of the same. Fig. 3 is a vertical transverse sectional view thereof. Fig. 4 is a detail in perspective of the removable roller anvil. Fig. 5 is a similar view of the eccentric roller die. Fig. 6 is a detail sectional view on the line 6—6 of Fig. 2.

Referring to the accompanying drawings:—A represents the body of the swage provided with the bottom groove or slot B which straddles the tooth of the saw to be swaged. The said body is held in position upon the saw by means of the set screw C, passing through one of the side walls or slots and working against the inwardly projecting stationary clamping lug or boss C', extending inwardly from the other side of said groove or slot in the body of the swage, and said lug and screw engaging the saw from opposite sides prevent it from having any lateral movement or play while the swaging devices are in operation. The body A is further provided in one side thereof with the circular bearing recess D, which recess opens into the bottom

of the groove or slot and receives the movable roller anvil E, which is free to revolve in said circular bearing recess and has a portion thereof project into the groove or slot B, through the communicating opening *d* of said bearing recess. Journaled in the opposite sides of said groove or slot and to one side of the center of said roller anvil E is the swaging spindle F. The said swaging spindle F terminates at one end in a squared head G adapted to receive the operating lever H, employed for oscillating said spindle, while a portion of the spindle within the groove or slot is provided with an eccentric swaging lug or die I, which is designed to be thrown against the front or cutting edge of the saw tooth, while the back of the tooth rests against the projecting face of the roller anvil.

As stated, when the swage is placed over a saw tooth that particular tooth has the point to be swaged resting between the roller anvil and the oscillating eccentric die. By now moving the operating lever H controlling the eccentric die, the eccentric portion thereof is forced over the front cutting edge of the tooth. When the front cutting edge of this tooth is subjected to this pressure, the roller anvil will revolve and thus carry or spread out the metal on both the back and front of the tooth, but the pressure being greater on the front or cutting edge of the tooth the same is spread the most to give a fine cutting edge, long drawn out, which could not possibly be secured by swages employing stationary anvils or dies, which allow only one edge of the tooth to be spread out. The opening of the eccentric die is limited by the adjustable right angularly disposed slotted stop J, adjustably secured to one side of the swage body and adapted to be struck by the die operating handle or lever when the said die has been carried sufficiently far from the saw tooth to lift the swage from the saw.

To one end of the body A is adjustably secured the elongated slightly curved guide K. The said guide K is designed to rest upon the top of the saw being operated upon so as to adjust the swage to different shaped and sized teeth and is provided with an inner slotted end L through which passes the adjusting and clamping screw M engaging the body of the swage. A lever N is also connected to

one end of the set screw C and is designed to control the same for clamping the swage upon the saw and for removing it therefrom.

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

1. In a saw swage, the combination with the slotted body; of a movable roller anvil loosely mounted in said body, and an oscillating eccentric spindle die moving in said body adjacent to one face of said roller anvil, substantially as set forth.

2. In a saw swage, the combination with a slotted or grooved body having a circular bearing recess opening into the bottom of the groove or slot in said body, a revolving roller anvil loosely mounted in said bearing recess and projecting into the groove or slot in said body, and an eccentric spindle die mounted in said body adjacent to the projecting face of said roller anvil, substantially as set forth.

3. In a saw-swage, the combination with the body and the guide and clamping devices therefor; of a roller anvil loosely mounted in

said body, an oscillating eccentric arranged adjacent to one face of the anvil, a right angularly disposed slotted stop adjustably secured to one side of the body, and a lever connected with said eccentric and adapted to strike said stop in one direction, substantially as set forth.

4. In a saw swage, the combination with the body; of a stop adjustably secured to one side of said body, a revolving roller anvil loosely mounted in said body, a swaging spindle journaled in said body adjacent to and at one side of the center of said anvil and provided with an eccentric swaging lug or die and a squared head at one end, and an operating lever connected to said head and limited by said stop, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN R. KIRKPATRICK.

Witnesses:

THOMAS L. GRAVES,
N. B. NEWNAM.