(No Model.)

D. DONALDSON.

SAW SWAGING MACHINE.

No. 301,696. Patented July 8, 1884.

Fig. 1.

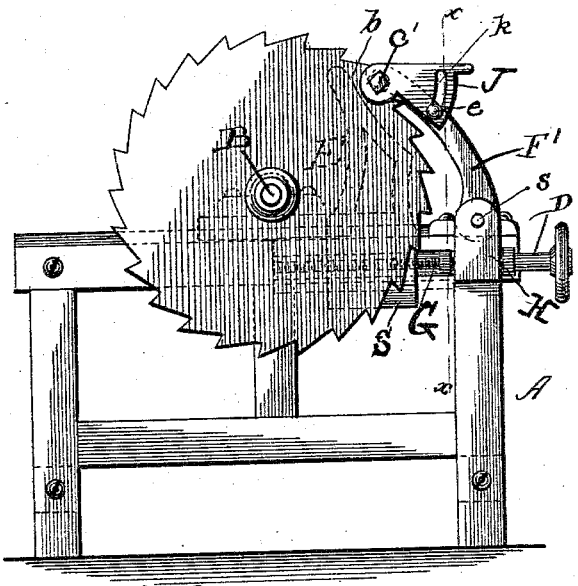


Fig. 4.

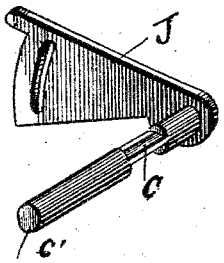


Fig. 2

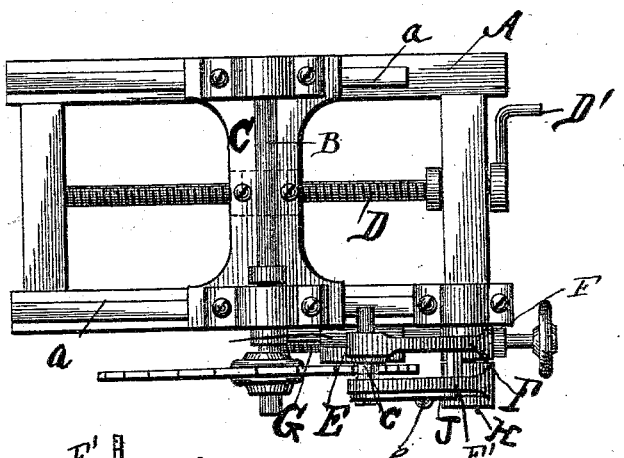
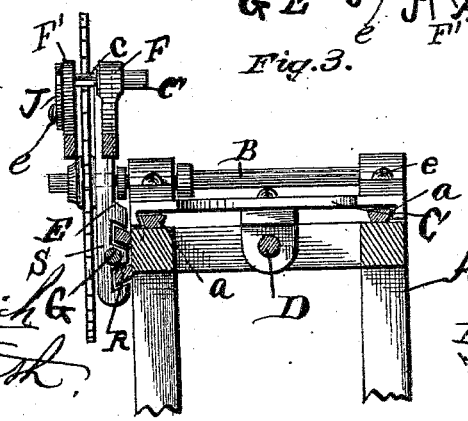


Fig. 3.



WITNESSES

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DAVID DONALDSON, OF ROCK ISLAND, ILLINOIS.

SAW-SWAGING MACHINE.

SPECIFICATION forming part of Letters Patent No. 301,696, dated July 8, 1884.

Application filed September 13, 1883. (No model.)

To all whom it may concern:

Be it known that I, DAVID DONALDSON, of Rock Island, in the State of Illinois, have invented certain new and useful Improvements in Machines for Holding Saws while being Swaged; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is an elevation of one side of the improved saw-swage. Fig. 2 is a top view. Fig. 3 is a vertical section on line *x x*, Fig. 1. Fig. 4 is a perspective view of the anvil-shaft and its slotted sector.

This invention relates to machines which are designed for holding and adjusting circular saws during the operation of swaging or spreading the points of the teeth; and it consists in certain novel devices for centering saws of different diameters, and also for holding the same during the operation of spreading the teeth by means of a hammer held in the hand of the attendant, as will be fully understood from the following description, when taken in connection with the annexed drawings.

A designates the frame of the machine, on top of which is an arbor, B, which has its bearings on a slide, C, guided by ways *a a*. This slide is movable by means of a screw-threaded shaft, D, on one end of which is a hand-crank, D'. On one end of the arbor the saw to be treated is suitably clamped, as shown in the drawings.

H designates a bracket secured to one side of the frame near the front end of the same, and provided at its upper end with bearings for a pair of curved arms, F F', which are suitably pivoted to the upper side of the said bracket upon a shaft, *s*. The said arms are connected at the upper ends by means of the anvil-shaft *c'*, which is provided between the arms F F' with a flattened section, *c*, forming the anvil. One end of the shaft *c'* projects beyond the inner curved arm, F. Upon the outer end of the shaft *c'* is keyed a sector, J, having a segmental slot, *k*, through which passes a set-screw, *e*, working in the outer curved arm, F', and by means of which the said sector, and with it the anvil-shaft, may be securely retained in any position to which it may be adjusted. The side of the frame is provided with dovetail guides R for a longitudinally-adjustable slide, S, adjustable by means of a set-screw, G, passing through the bracket H, and having an upward-extending frame, E, provided with a curved rest or bearing, *b*, adapted to support the inner curved arm, F, thus retaining the latter, and with it the anvil-shaft, securely in position, and affording a firm support for the same during operation.

The operation is as follows: The saw is clamped on the arbor B, and by means of the screw D it is adjusted forward or backward according to its size until the point of a tooth will rest on the anvil *c* when it is in position shown in the Figs. 1 and 2. The slide S, carrying the rest E, is also adjusted by means of the screw G until it will support the free end of the curved arm F, thus retaining the latter and the anvil in position, as stated, during operation. By means of the slotted sector the anvil-shaft may be turned until its flattened section forming the anvil shall be adjusted to the proper position. in which it is retained by the set-screw *e*. The operator, with a small hammer, may now spread or swage the point of the tooth resting on the anvil. This being done, the curved arms are thrown outward or forward a short distance, thus bringing the anvil away from the saw, and enabling the latter to be turned forward the space of one tooth. The curved arms carrying the anvil are now moved back to the original position, thus causing the anvil to support the next tooth and enabling the operation to be repeated.

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

1. In a saw-swaging machine, the combination of a frame, a horizontally-adjustable shaft or arbor, a horizontally-adjustable rest, and an anvil pivotally secured to arms pivoted to a bracket, H, secured to one side of the frame, as set forth.

2. The combination of the pivoted anvil bearing arms, the anvil thereon, and the rest therefor, substantially as described.

3. The combination of the adjustable anvil, means for rigidly holding the same, the pivoted anvil-arm, and the adjustable rest, substantially as described.

4. The combination of the adjustable saw-holding arbor, the pivoted arm bearing an adjustable anvil, and the adjustable rest, substantially as and for the purposes described.

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

DAVID DONALDSON.

Witnesses:

ADAIR PLEASANTS,

M. EDWARD SWEENEY.