P. G. GIROUD.

SCROLL-SAWS.

No. 179,907. Patented July 18, 1876.

Fig: 1.

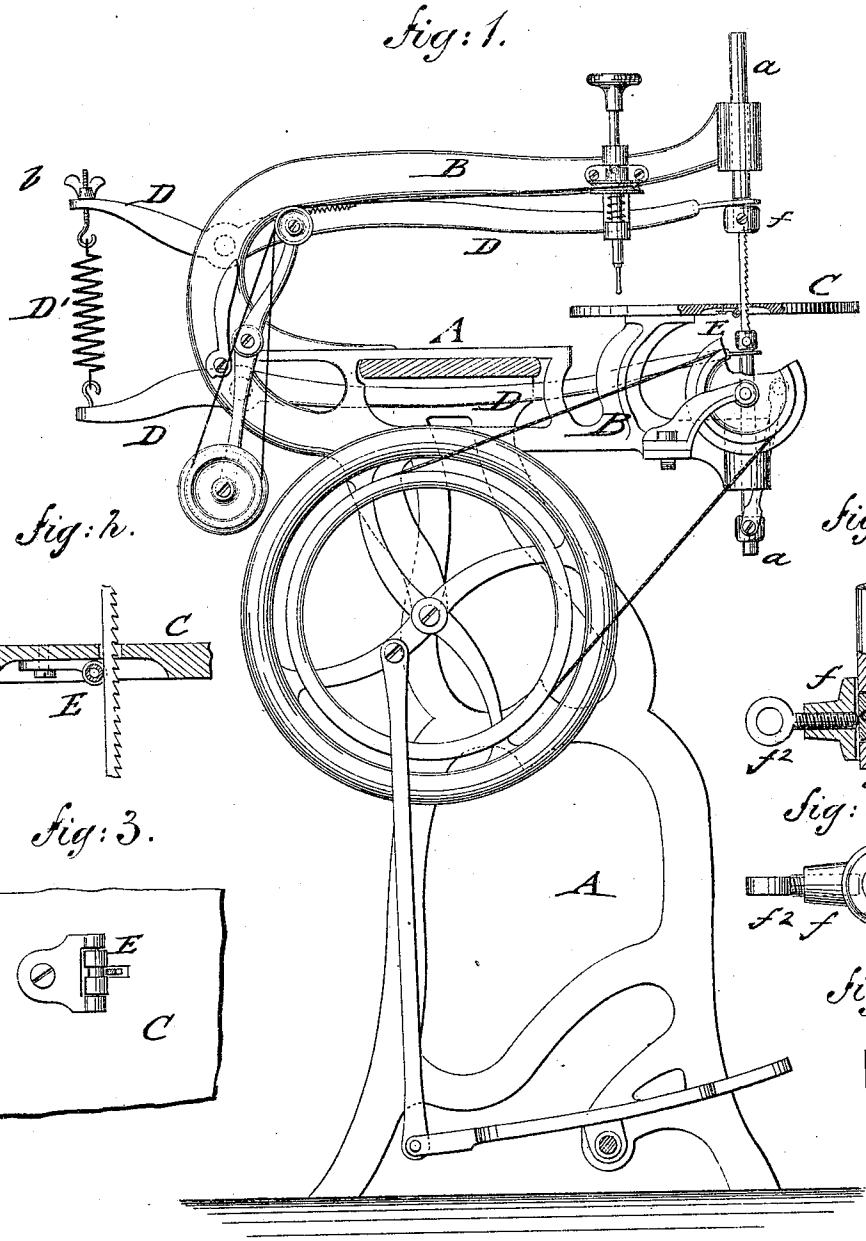

Fig: 2.

Fig: 3.

Fig: 4.

Fig: 5

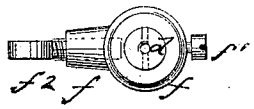

Fig: 6

WITNESSES:

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UNITED STATES PATENT OFFICE.

PETER G. GIROUD, OF BROOKLYN, NEW YORK, ASSIGNOR TO HIMSELF AND THEODORE L. JABINE, OF SAME PLACE.

IMPROVEMENT IN SCROLL-SAWS.

Specification forming part of Letters Patent No. **179,907**, dated July 18, 1876; application filed May 27, 1876.

To all whom it may concern:

Be it known that I, PETER G. GIROUD, of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Scroll-Saws, of which the following is a specification:

In the accompany drawing, Figure 1 represents a side elevation of my improved scroll-saw. Figs. 2 and 3 are detail side and bottom views of the saw-blade-steadying roller. Figs. 4 and 5 are, respectively, a central section and bottom view of the saw-clamping device; and Fig. 6, a detail side view of the saw-clamping block.

Similar letters of reference indicate corresponding parts.

The object of my invention is to provide an improved scroll-saw for sawing the minutest work in wood, iron, and other materials, by providing a steady tension that keeps the saw-blade at an even strain during its whole stroke, without interfering in the least with the driving-power.

The saw-blade is clamped securely in such a manner that it may be put or removed with great facility. The back of the saw-blade is steadied along the table to work with great accuracy.

The invention will first be fully described in connection with the drawing, and then pointed out in the claims.

In the drawing, A represents the supporting base-frame of my improved scroll-saw, and B the top frame attached thereto. The front sockets of the arms of top frame B guide the sliding saw-holding rods *a*, which are vertically reciprocated by a treadle and suitable transmitting mechanism. The top frame B supports the table C at the front part, and at the rear part are the fulcrumed lever-arms D, that serve to impart the tension to the saw-blade. The lever-arms D are connected at the rear ends by a strong spiral spring, D′, whose tension is adjusted by a top set-screw, *b*, while the forked-shaped front ends of lever-arms D are applied to the saw-holding rods *a*.

The spiral spring secures an active, steady tension to the saw-blade throughout the whole stroke of the same without interfering or impeding the driving-power. This forms an important point of my invention, as no loss of power is incurred, as in saws where the tension is produced by pulling directly against a spring at every stroke, and as thereby a great nicety of adjustment is obtained, according to saws of different strength and the requirements of different classes of work. The saw is enabled to be run very slowly, and do fine and careful work, as the power is economized by the non-interference of the tension.

The saw-blade is attached to the saw holding and guiding rods by a socket-hole, *d*, at the ends, a block, *e*, with nick or notch *e′*, fitting a side recess of the rods, and a collar, *f*, with retaining set-screw f^1 and block-clamping screw f^2.

The end of the saw-blade is inserted into the socket-hole *d*, and guided by the notch of the clamping-block *e* into position between rod and block, being then clamped rigidly by the fastening-screw f^2, securing thus the saw-blade with considerable power, and admitting the putting in and removing of the saw with great facility.

The back of the saw is steadied by means of a grooved roller, E, turning in bearings at the under side of the table back of the perforation for the blade. The steadying-roller prevents the irregular action of the saw, and adapts the same for very fine work.

The top frame is further provided with a drilling attachment of the customary construction, that enhances the usefulness and efficacy of the machine.

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

1. As an improvement in sawing-machines, the combination of the reciprocating saw-guiding rods with fulcrumed lever-arms and an adjustable spiral spring, applied to the rear ends to impart steady tension to the saw

independent of the driving-power, substantially in the manner and for the purpose specified.

2. In scroll-saws, the combination of the recessed saw-guiding rods, having entrance holes, with clamping side-block, encircling collar or band, retaining and fastening screws, substantially as specified.

3. A saw-blade attached to guide-rods by end holes *d*, block *e*, having notch *e'* fitting the side recess of rods, collar *f*, and set-screws f^1 f^2, as shown and described.

PETER G. GIROUD.

Witnesses:

PAUL GOEPEL,

THEODORE L. JABINE.