

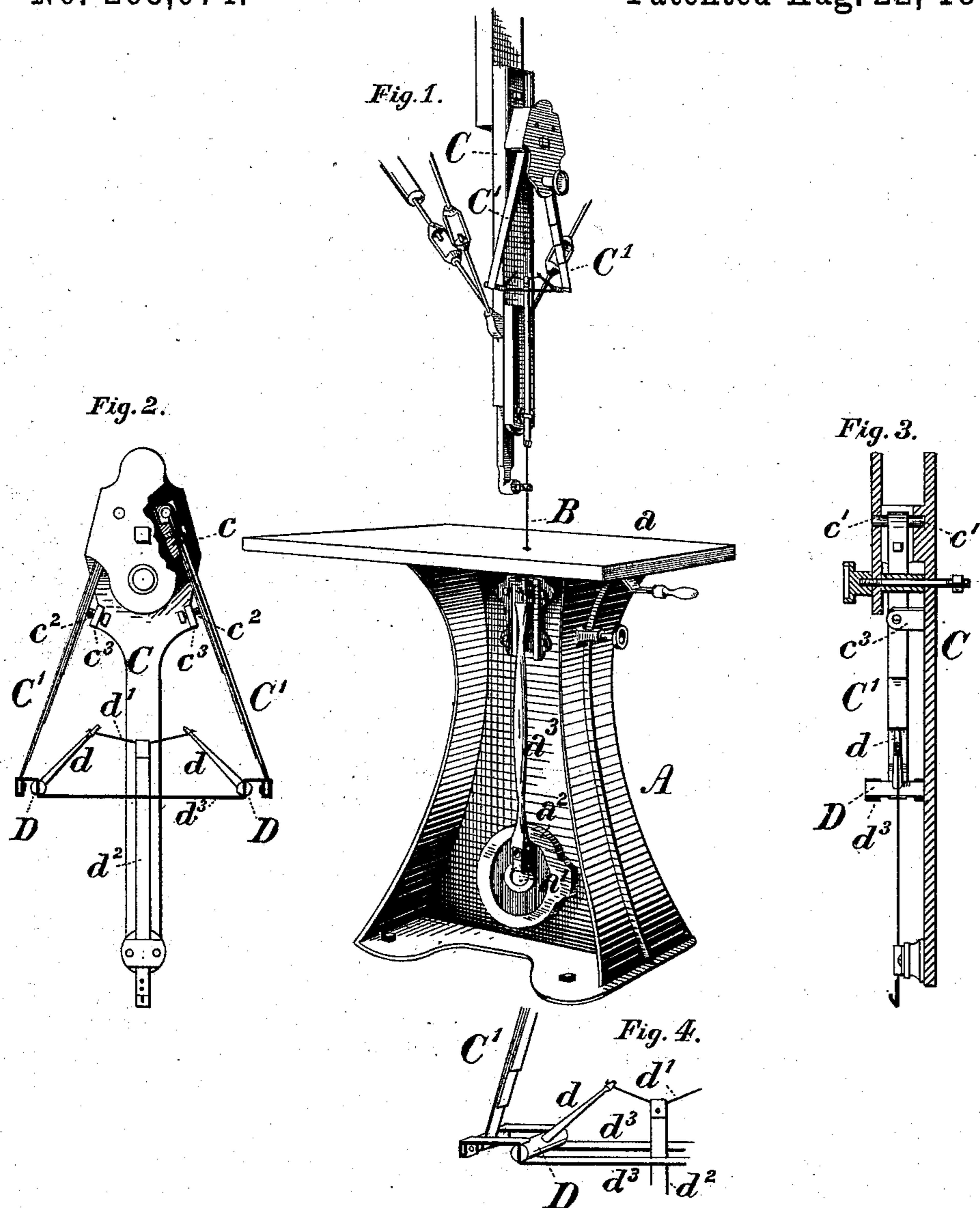
(No Model.)

F. H. SWEET.

DEVICE FOR STRAINING SCROLL SAWS.

No. 263,074.

Patented Aug. 22, 1882.



WITNESSES:

N. H. Coulter

Geo. T. Kelly

INVENTOR

Frederick H. Sweet

by Coulter & Bell,  
attys.

# UNITED STATES PATENT OFFICE.

FREDERICK H. SWEET, OF WILLIAMSPORT, PENNSYLVANIA, ASSIGNOR TO  
ROWLEY & HERMAN, OF SAME PLACE.

## DEVICE FOR STRAINING SCROLL-SAWS.

SPECIFICATION forming part of Letters Patent No. 263,074, dated August 22, 1882.

Application filed June 5, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK H. SWEET, of Williamsport, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Strains for Scroll-Saws, of which improvements the following is a specification.

The objects of my invention are to enable the strain upon the saw to be equalized, as nearly as may be, at all points of the stroke, and to admit of variation of the tension of the straining-springs, as may be from time to time required.

To these ends my improvements consist in the combination of a scroll-saw, a head-stock, and two pendulous springs, each pivoted at one end to the head-stock and connected at the other to the saw; also, in the combination of a head-stock, pendulous springs pivoted thereto, and adjusting-screws; also, in the combination of a head-stock, pendulous springs, floating or unpivoted rockers, and flexible connections uniting the rockers with the springs and saw. The improvements claimed are hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a view in perspective of a scroll-sawing machine embodying my improvements; Fig. 2, a front view, in elevation, of the head-stock and its connections; Fig. 3, a vertical central section through the same; and Fig. 4, a view in perspective of the lower portion of one of the springs, showing its connection with the adjacent rocker and with the saw.

The frame A of the machine supports upon its top the table *a*, on which the work is placed, and is provided with proper bearings for a driving-shaft, *a'*, carrying a crank-wheel, *a''*, to which the connecting-rod or pitman *a'''*, by which the saw is reciprocated, is coupled.

The saw B is connected at its lower end to the cross-head of the pitman *a'''*, and at its upper end to the springs C', by which the necessary strain is imparted.

The head-stock C is adjustably secured to a suitable fixed support in such manner as to be raised and lowered thereon to accommodate different thicknesses of stuff operated upon, and serves as the abutment for two pendulous plate-springs, C', each of which is secured at

its upper end to a box, *c*, pivoted to the head-stock by pins or journals *c'*, and projects downwardly and outwardly therefrom at an acute angle with the saw.

An adjusting-screw, *c''*, engages a nut, *c'''*, in the head-stock at a point below the bearing of each of the springs, and projects through the nut toward the inner face of said spring, and in such relation thereto as to be capable of being pressed against it to a greater or less degree by being screwed outwardly, such pressure correspondingly increasing the tension of the spring.

The connection of the straining-springs C' with the saw B is effected through two floating or unpivoted rockers, D, each having an upwardly-projecting arm, *d*, connected by a string of catgut or other suitable flexible material, *d'*, to the upper end of a steel strip or plate, *d''*, the lower end of which is hooked to the saw.

The lower ends of the springs C' are connected by two flexible straps, *d'''*, each of which passes through or around the rockers D, and is secured thereto, the straps thus constituting a yielding support for said rockers, and serving, with the same, to equalize and properly transmit the tension of the springs to the saw. The absence of fixed bearings relieves the rockers from friction, and by reason of the flexibility of their connections with the springs and saw and the slight range of vibration of the springs, due to their pendulous attachment to the head-stock, a substantially uniform tension is imparted to the saw at all points of its stroke.

I claim as my invention and desire to secure by Letters Patent—

The combination, substantially as set forth, of a head-stock, pendulous springs pivoted thereto, and a pair of floating or unpivoted rockers connected to and supported by flexible straps connecting the free ends of the springs, and having arms flexibly connected to a saw.

FREDERICK H. SWEET.

Witnesses:

THOS. H. HARTMAN,  
J. S. TAYLOR.