H. J. CORDESMAN, Jr.

SCROLL-SAWS.

No. 177,621. Patented May 23, 1876.

Fig. 1

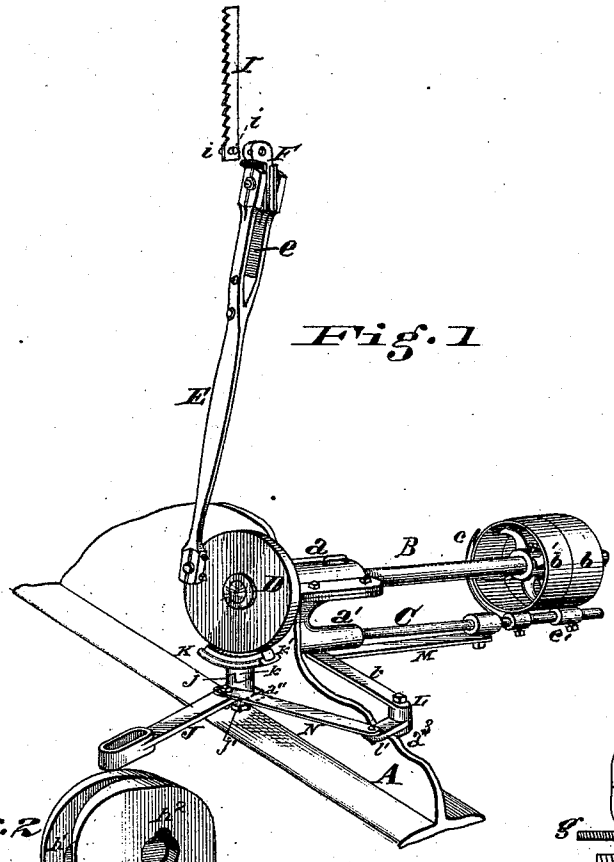


Fig. 2

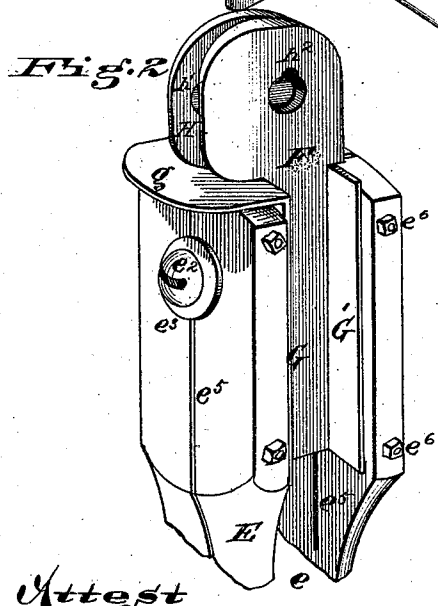
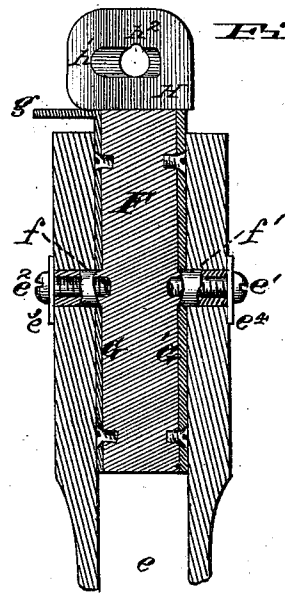


Fig. 3



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UNITED STATES PATENT OFFICE.

HENRY J. CORDESMAN, JR., OF CINCINNATI, OHIO, ASSIGNOR TO CORDESMAN, EGAN & CO., OF SAME PLACE.

IMPROVEMENT IN SCROLL-SAWS.

Specification forming part of Letters Patent No. **177,621**, dated May 23, 1876; application filed February 19, 1876.

To all whom it may concern:

Be it known that I, HENRY J. CORDESMAN, Jr., of Cincinnati, Hamilton county, and State of Ohio, have invented an Improvement in Reciprocating Scroll-Saws, of which the following is a specification:

My invention consists, first, in a peculiar construction of the saw cross-head, by which provision is made for the easy removal and correct and ready readjustment of the saw; second, in a solid cross-head for the saw, having flaring notch with depressions for the reception of the saw; third, in a new and peculiar device for shifting the belt, and at the same time arresting the momentum of the saw and parts connected thereto.

In the accompanying drawings, Figure 1 is a perspective view of the moving parts of my saw, showing also a portion of the frame of the machine. Fig. 2 is a perspective view of the saw-slide, to which the upper end of the pitman and lower end of the saw are secured. Fig. 3 is a section of the saw-slide through the pitman-trunnions.

A is a portion of the frame of the machine, having a bearing, *a*, for driving-shaft B, and bearing *a'* for belt-shifting rod C. D is the crank or brake wheel, (secured to shaft B,) to which is attached the pitman E. On shaft B are the loose and tight pulleys *b b'*, respectively, and on rod C are a couple of fingers, *c c'*, for shifting the belt from one pulley to the other. Secured to the upper end of pitman E, which is split at *e* to receive it, is a retaining-hook or cross-head, F, and guide-plates G G', formed to encompass the usual slideways of the machine. These plates are firmly secured to the cross-head F by means of small screws shown in Fig. 3. The cross-head F is formed of solid steel, and, as seen in Fig. 3, has formed upon it two trunnions, *f f'*, to enter the arms of the pitman E, and thereby form a swiveling connection. The arms of the pitman are held upon these trunnions by means of screws e^1 e^2 and plates e^3 e^4. The arms of the pitman are formed to receive the trunnions *f f'*, and take up lost motion in the swiveling-joint by means of slits e^5 and bolts e^6, as seen in Fig. 2. The upper part of cross-head F is enlarged in width, and extends above the top of pitman E, having a slot, H, which flares laterally in wedge-shape. On the projecting side of cross-head the plate G is secured. The plate G at the top is bent over, and extends laterally outward to form a step, *g*, over the top of pitman E. On the inner surfaces of the slot H are horizontal depressions *h* h^1, and at right angles to these depressions are perforations h^2, whose limits extend above the top edges of the depressions *h* h^1. The lower end of the saw-blade I has cylindrical projections *i*, from its sides, in such position that when the end of the saw rests upon the step *g* of plate G they will be directly in line with depressions *h* h^1 in slot H, and can easily be slid into the slot by reason of the flaring edges above mentioned; and by reason of the upward extension of the perforations h^2 beyond the depressions *h* h^1 the cross-head F will retain the saw-blade in operation, when under strain.

It is evident by the construction of above-mentioned device, consisting of cross-head F, having flaring slot H, depressions *h* h^1, and perforations h^2, and the plate G and step *g*, that great facility is provided for replacing the saw after it has been removed to enter inside work, as the step *g* limits its downward motion, and guides it into place. On the lug *a''*, extending from frame A, is secured a foot-lever, J, having cam-projection *j*. K is a brake-block, fitted to embrace accurately the lower edge of the wheel D, and it has a cam projection, *k*, to correspond with cam *j*, upon which it rests. The brake K and lever J are both secured to the lug *a''* by means of a bolt, *j'*, passing through them. Secured to frame A is a lug, a^3, upon which is secured and operates a bell-crank lever, L, whose long arm *l* connects with a rod, M, attached to the shifting-rod C, which slides in bearing *a'*, and whose short arm *l'* connects with rod N attached to lever J at a point close to the cam-projection *j*.

By reason of the combined action of parts just described the brake-block K will arrest the motion of wheel D at the same time that the shifting-rod C shifts the belt from tight pulley *b'* to loose pulley *b*, and an instantaneous stoppage of the saw will be the result.

The brake-block K is prevented from turning by the close contact of its edge k' with the frame A.

I disclaim what is shown in United States Letters Patent Nos. 127,241 and 109,060.

I claim—

1. The cross-head F, provided with guide-plates G G′, having step g, flaring jaws H, and depressions h h^1 h^2, substantially as and for the purpose specified.

2. The solid cross-head F, provided with flaring jaw H, having depressions h h^1 h^2, arranged substantially as and for the purpose specified.

3. In combination with the brake-wheel D and fast and loose pulleys b' b the cam-brake K, cam foot-lever J, and shifting-rod C, connected and operating substantially as and for the purpose specified.

In testimony of which invention I hereunto set my hand.

HENRY J. CORDESMAN, JR.

Witnesses:
EDGAR J. GROSS,
JOHN E. JONES.