

C. A. SANDS.

ATTACHING HANDLES TO CROSS-CUT SAWS.

No. 189,960.

Patented April 24, 1877.

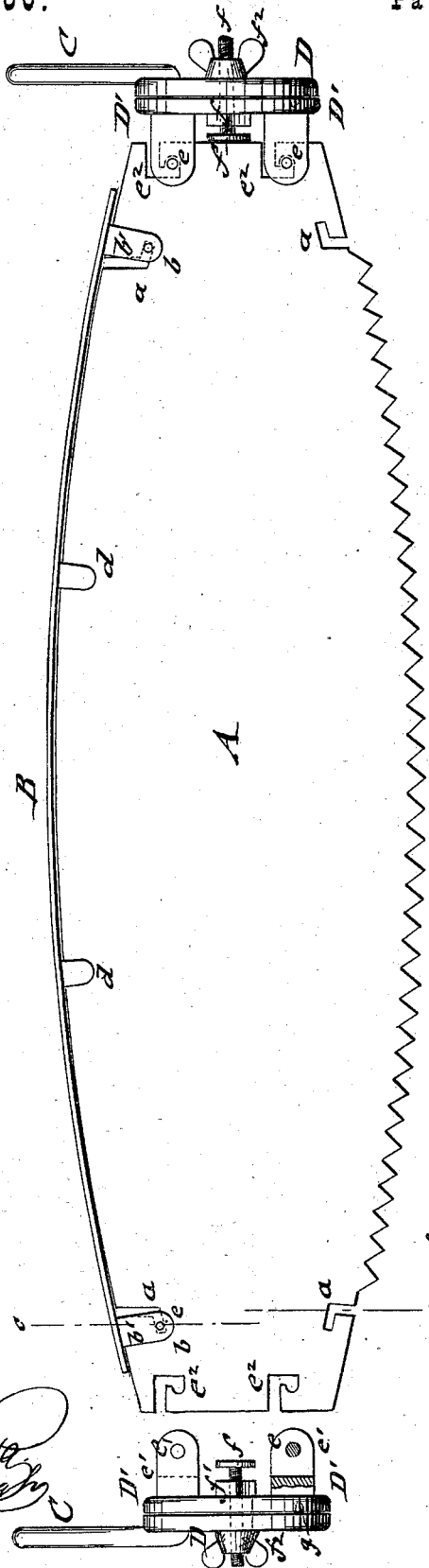


fig: 1.

fig: 4.

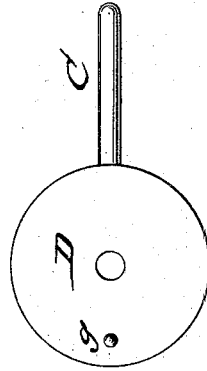


fig: 3.

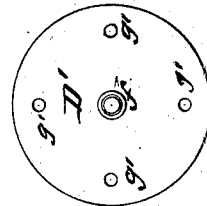
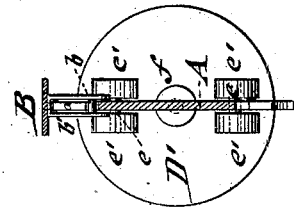


fig: 2.



WITNESSES:

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CHARLES A. SANDS, OF BURLINGTON, KANSAS.

IMPROVEMENT IN ATTACHING HANDLES TO CROSSCUT-SAWS.

Specification forming part of Letters Patent No. 189,960, dated April 24, 1877; application filed January 29, 1877.

To all whom it may concern:

Be it known that I, CHARLES A. SANDS, of Burlington, in the county of Coffee and State of Kansas, have invented an Improvement in Attaching Handles to Crosscut-Saws, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a side elevation of my improved crosscut-saw; Fig. 2, a vertical transverse section of the same on line *cc*, Fig. 1; and Figs. 3 and 4 are detail views of the clamping handle-plates.

Similar letters of reference indicate corresponding parts.

The invention has reference to such improvements in cross-cut saws that the same may be held in horizontal position to insure a straight cut without extra exertion, and that may be carried by the workman without danger of accidental injury by the teeth, the handles being capable of adjustment, whatever the direction of the saw, so as to admit the upright position of the sawyers, and the sawing off of the timber close to the ground.

The invention consists of a saw with a detachable spring-guard, that serves to stiffen the back of the same, and also to cover the teeth of the same after use.

It consists, further, of adjustable handles applied to face-plates clamped to the saw ends.

In the drawing, A represents a saw-blade of the usual size for cutting timber, which is preferably made with a back curved to the same degree, or symmetrically to the front or teeth, as shown in Fig. 1.

The front and back of the saw-blade A are provided, near the ends, with L-shaped recesses or notches *a*, into which the cross-pins *b*, of a detachable spring-guard plate, B, lock when inserted therein.

The cross-pins *b* are supported in end lugs *b'* of the spring-guard B, as shown in Fig. 2, said lugs bearing on both sides of the saw-blade, while intermediate parallel lugs *d* of the guard B bear on both sides of the saw, and serve, when the same is applied to the back, to stiffen the same, so as to secure a straight cut at whatever position the same is held.

It is especially useful when the saw is held

in horizontal position for cutting down trees, as thereby the extra effort necessary to overcome the wave motion of the saw is not required.

The support given to the saw-back at the end and intermediate points, by the binding-lugs, facilitates the horizontal cutting of the saw, and brings the same more fully within control of the sawyers.

When the cutting is completed the spring-guard is detached from the back and attached to the front or face of the saw, so as to protect the teeth when the saw is not used, and admit the convenient carrying of the same by the workman when going to or from the work.

The handles C are attached to disk-shaped plates D, that are clamped to corresponding base-plates D', secured at right angles to the saw. The base-plates D' lock, by cross-pins *e* of lugs *e'*, into L-shaped end recesses *e''* of the saw by turning the screw-nuts *f* of clamp-bolts *f'* tightly against the under side of the base-plates D'. The clamp-bolt *f'* passes through center holes of the handle-plates D D', and serves, in connection with the head of the bolt *f'* and an outer wing-nut, *f''*, to clamp the handle-plates rigidly together. One or more pins, *g*, of the handle-plate D enter corresponding holes *g'* of the base-plate, and admit thereby the setting of the handles into line with the blade for common cutting, or at right angles to the same for cutting trees, or at any other angle, as required.

The handles are thus always kept in vertical position, allowing the men to stand upright when using the saw.

The handle-plates prevent the saw from coming in contact with the ground when laid down, so as to avoid dampness, rust, &c., as the plates form supports for the saw in any position of the same.

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

1. The combination of a detachable spring-guard plate with a saw-blade, said guard-plate being adapted for attachment either to the front or back of the saw-blade, substantially as and for the purpose set forth.

2. The combination of the adjustable han-

dle-plate D and the attaching-plate D', having lugs e^1 , pins e , bolt f^1 , and nut f , with the saw-blade having L-shaped end slots e^2 , substantially as and for the purpose set forth.

3. The combination of crosscut-saw A and plate D', clamped at right angles to saw-blade, and provided with holes g' , with adjustable handle-plate D, having pin or pins g , and with

clamping-bolt f^1 and clamping-nuts f and f^2 , to set the handle at any position to saw-blade, substantially as specified.

CHARLES A. SANDS.

Witnesses:

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