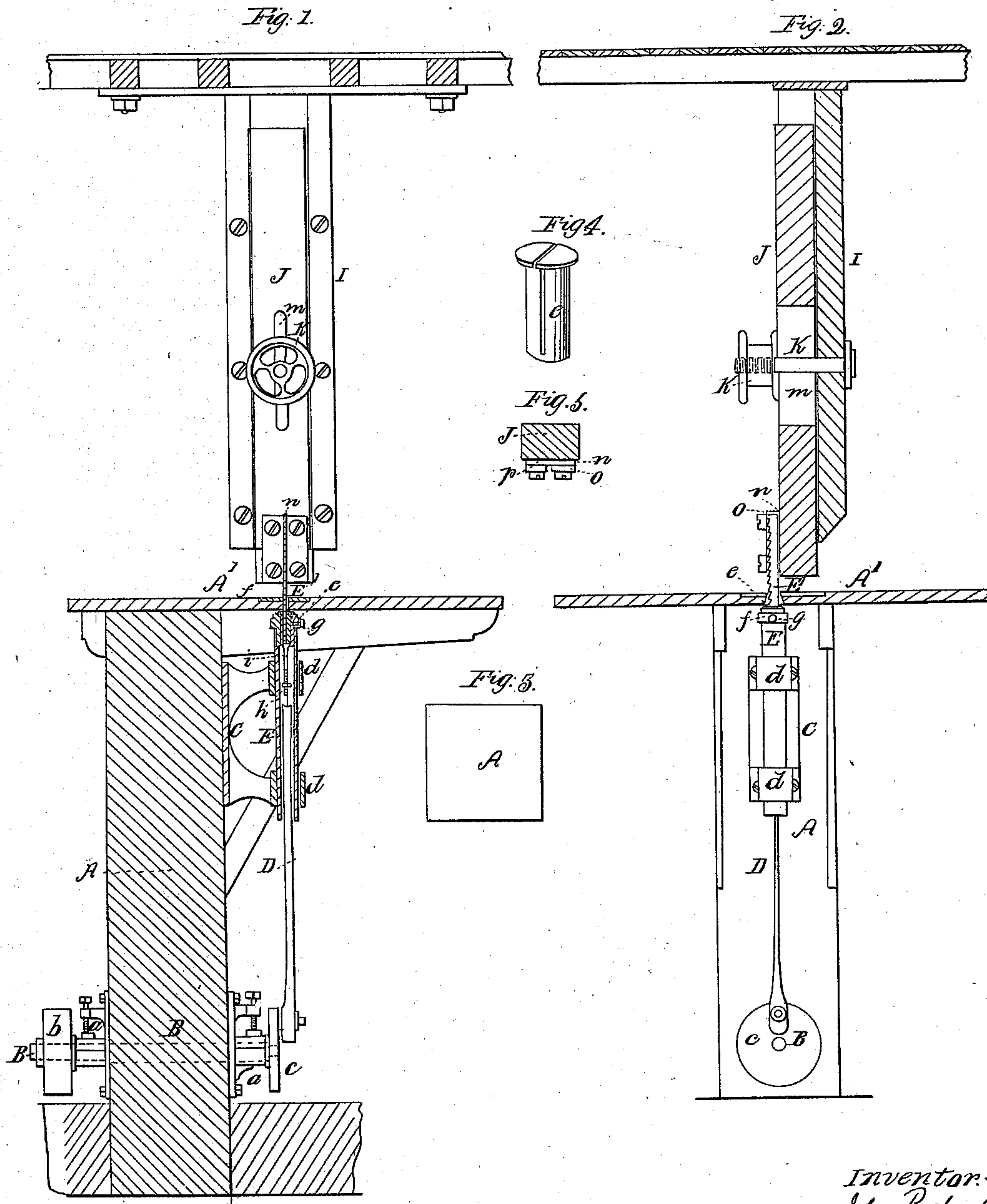


J. Richards,

Scroll Sawing Machine.

N^o 35,392.

Patented May 27, 1862.



Witnesses.
Gustavus Dietrich.
C. S. Jacob.

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By
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Att'y.

UNITED STATES PATENT OFFICE.

JOHN RICHARDS, OF COLUMBUS, OHIO.

IMPROVEMENT IN SCROLL-SAW MILLS.

Specification forming part of Letters Patent No. 35,392, dated May 27, 1862.

To all whom it may concern:

Be it known that I, JOHN RICHARDS, of Columbus, in the county of Franklin and State of Ohio, have invented a new and useful Improvement in the arrangement of Scroll-Saw Mills; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical transverse section of a scroll-saw mill arranged according to my improved plan. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a horizontal section of the main supporting-structure. Fig. 4 is a perspective view of the clamping device of the saw-stock. Fig. 5 is a horizontal section of the guard and guide and support of the upper part of the arrangement.

Similar letters of reference in the several figures indicate corresponding parts.

The nature of my invention under this patent consists in the arrangement and combination of the solid supporting-structure, tubular saw-stock, and pitman, and the guard with supporting and guide plates, in the manner hereinafter described.

With all arrangements of scroll-saws known to me the great trembling and vibrating sensation produced by the rapid speed to which the saw is necessarily driven is a very serious objection, it racking the saw-mill frame producing inaccuracy in the sawing, breaking or impairing the saw-blade, and disturbing the workmen, and also loosening the connections of the building in which the mill is operated. My invention to a very great degree obviates these objections.

To enable others skilled in the art to make and use my invention, I proceed now to describe the same with reference to the drawings.

A is a frame or support formed of a single, strong, upright pillar of metal or wood. It is made long enough to extend one or more feet below the flooring of the building, and into the ground, or be secured to a heavy timber or block planted in the ground or other firm place. This pillar is bored through at a suitable point above the flooring or ground, and in the opening thus formed a through shaft, B, is fitted, the extending ends of the shaft finding their bearing or

support in strong boxes, which are bolted to the pillar, as shown at *a a*, Fig. 1, the shaft having a driving pulley, *b*, at one extremity and an eccentric, *c*, at the other. Near the top of the pillar on the front portion a strong bracket, C, is bolted, said bracket having two arms through which vertical guide-boxes *d d* are formed, and on top of the pillar the ordinary sawing-table, A', with a passage for the play of the saw through it, is mounted and firmly bolted.

To the eccentric *c* a pitman-rod, D, is attached. This pitman-rod is made with a tubular stock, E, on its upper end, the stock being of sufficient diameter to allow the pitman-rod, although it extends up into the stock a considerable distance, a chance to bend as it is drawn by the eccentric out of a vertical line, it bending within the tube. By this arrangement the stock answers as a part of the length of the pitman and yet does not render it necessary that the pitman should be made longer than usual because of the use of the stock.

The saw-blade E' is attached to the upper end of the stock or guide E, and the pitman is attached to the stock by means of a split pin, *e*, a tubular socket-head, *f*, a set-screw, *g*, a nut, *h*, and a screw-bolt, *i*, as shown. The socket-head fits in the top of the tubular stock, and is supported by means of a collar formed on itself. In its bottom a countersunk hole is cut. The screw-bolt *i* is inserted into the socket-head and screwed down into the end of the pitman-rod, having its hold in the screw-nut *h*, which is set down into a socket cut in the upper end of the pitman-rod. The head of the screw-bolt finds its seat in the countersunk portion of the bottom of the socket-head. The split pin *e* is inserted into the socket-head, and in its split the end of the saw is set and clamped by means of the set-screw *g*, which enters the side of the socket-head and binds against one side of the split pin *e*. The tubular stock is made with flat sides, so that as it plays up and down in the guide-boxes *d d*, to which it is fitted, it shall not turn therein.

The upper end of the saw-blade is not attached to any device above the table, but is left disconnected, and in place of upper connections a vertical stud, I, is extended down from the ceiling of the building to within a short distance of the top of the table. This stud has a deep groove

cut in it from top to bottom. In this groove a strong strip, J, is fitted to slide up and down, being held in position by means of a strong set-screw, K, which has a clamp-nut, *k*, on one end, and is loosely passed through an oblong slot, *m*, of the strip J, but firmly fastened in the stud I, as shown. At the lower end of the strip J hardened steel guide and supporting plates *n o p* are firmly attached by screw-bolts. These plates are on the front of the lower end of the strip. The plate *n* attaches flatwise to the strip, and constitutes a back support to the back edge of the upper part of the saw. The strips *o p* attach to the face of the plate *n* on opposite sides of a central portion thereof, and constitute a vertical lateral guide for the upper portion of the saw-blade. The strip J rests by its lower end upon lumber which is being scrolled, and thus serves as a guard, and as it can be raised or lowered it will accommodate varying thicknesses of lumber. The upper end of the saw-blade passes up between the steel plates *o p* and bears against *n*, and thus the strip answers as a guard, a guide, and a support, all of which functions it per-

forms, whatever may be the adjustment imparted to it.

I do not claim under this patent the tubular stock, nor the combined guard, support, and guide, as I have applied for separate Letters Patent for the same; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. The tubular saw-stock E and flexible pitman D, in combination with the guard, support, and guide J *n o p*, substantially as and for the purpose described.

2. The tubular saw-stock E and flexible pitman D, in combination with the guard, support, and guide J *n o p*, arranged with the single solid structure A, and operating in the manner and for the purpose set forth.

Witness my hand and seal in the matter of my application for patent on improved scroll-saw mill this 14th day of April, A. D. 1862.

JNO. RICHARDS. [L. S.]

Witnesses:

GUSTAVUS DIETERICH,
EDWIN S. JACOB.