W. Clemson.

Saw-Set.

No. 29,670. Patented Aug. 21, 1860.

Fig. 1.

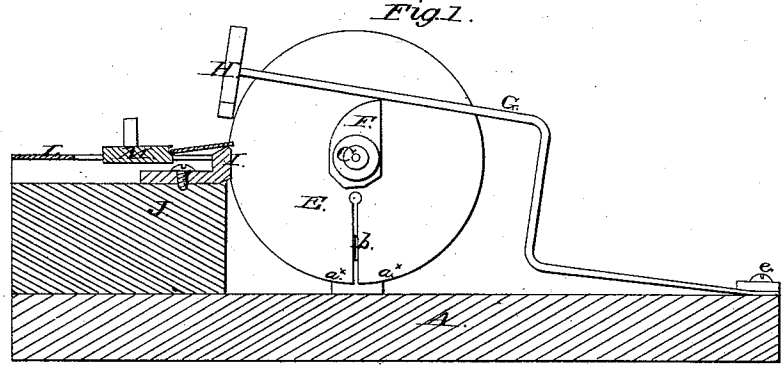
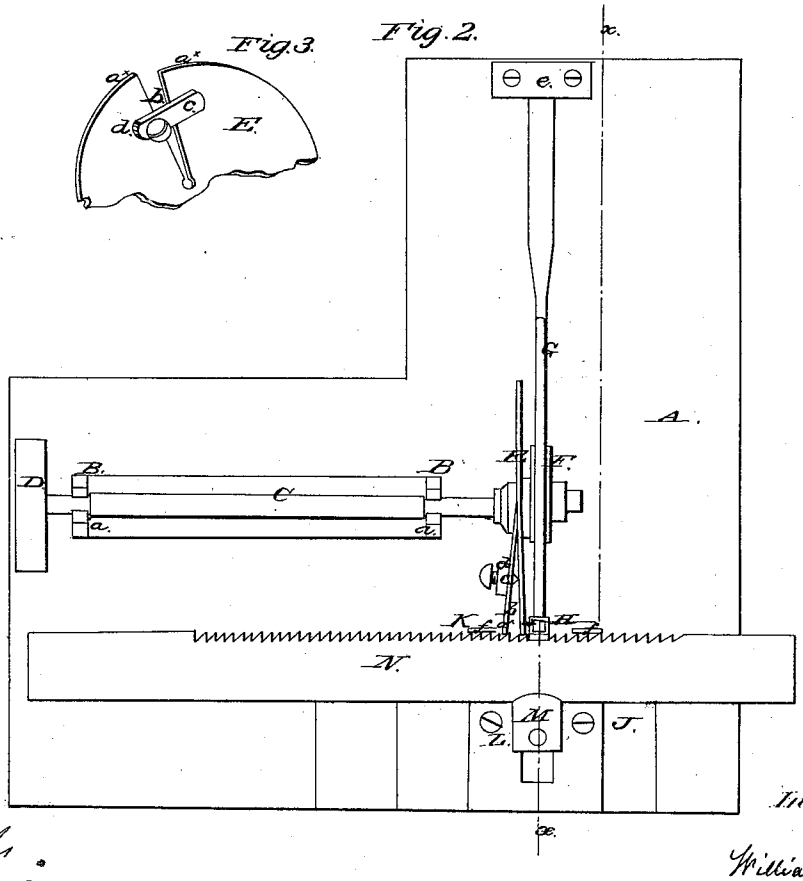


Fig. 3.

Fig. 2.



Witnesses:

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WM. CLEMSON, OF MIDDLETOWN, NEW YORK.

SAW-SET.

Specification of Letters Patent No. 29,670, dated August 21, 1860.

To all whom it may concern:

Be it known that I, WILLIAM CLEMSON, of Middletown, in the county of Orange and State of New York, have invented a new and useful Device for Setting Saws; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of my invention, *x*, *x*, Fig. 2, indicating the plane of section; Fig. 2, a plan or top view of the same; Fig. 3, a perspective view of a portion of the cam pertaining to the same.

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

This invention relates to a device for setting saws by power, the parts working automatically by the rotation of the driving shaft.

The invention consists in the employment or use of a spring-hammer, cam, anvil and gage, constructed and arranged to operate as hereinafter described, whereby the desired work may be rapidly and perfectly done and the device rendered capable of setting saws with different sized teeth.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a base or bed on which two uprights B, B, are placed, and C, is a shaft which has its bearings *a*, at the upper ends of said uprights. On the outer end of this shaft a driving pulley D, is placed and a cam E, is at its inner end. This cam E, is of circular form and is constructed of a metal plate having a slot *b*, cut radially in it and extending nearly or quite to its shaft C.

To one side of the cam and at one edge of the slot *b*, there is attached a short bar *c*, which extends across the slot and has a screw *d*, passing through it, said screw bearing against the cam at the side of the slot opposite to that where the bar *c* is attached. By screwing the screw *d*, against the cam, the edges of the same adjoining the slot *b*, as shown at a^x, a^x, will be bent or curved so as to form the cam. See Figs. 2 and 3. The periphery of the cam at all other parts is in a plane at right angles with its shaft.

On the inner end of the shaft C, there is placed a tappet F, which acts against a spring shaft G, one end of which is attached to the base or bed A, as shown at *e*. The opposite end of the shaft C, has a hammer H, attached, said hammer being directly over an anvil I, which is secured on a block J, on the base.

On the block J, there is placed a gage K, which is formed simply of two upright lips *f*, *f*, at the inner end of a plate L, on the block. This block J, is slotted longitudinally and a slide M, is fitted thereon.

The operation is as follows: The saw N, to be set is placed transversely on the plate L, and its teeth are pressed against the lips *f*, *f*, by pushing the slide M, against its back edge—this being done by hand. The periphery of the cam E, is fitted between the teeth of the saw N, and the shaft C, is rotated by any convenient power. At every revolution of the cam E, the saw will be moved the distance of two teeth, the cam being sprung or adjusted by the screw *d*, to effect this result, and at the cessation of each movement of the saw the tappet F, which at this point of its rotation has elevated the shaft C, leaves the latter and the hammer H, descends on the tooth which is on the anvil and gives it its set. During the action of the hammer on the tooth, the saw is kept perfectly still as the unbent portion of the cam works between the teeth, but when the hammer rises under the action of the tappet F, the saw is fed along or moved the distance of two teeth as the bent parts a^x, a^x, of the cam engage with the saw. Every alternate tooth of the saw is acted upon by the hammer at one side, and the saw is then turned and the remaining teeth acted upon in a similar manner.

It will be readily seen that the saw may be fed a greater or less distance at each movement by springing the parts a^x a^x, in a greater or less degree. Saws therefore having teeth of different sizes may be set on one and the same machine.

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

1. The combination of the cam E, and spring or trip hammer H, with a suitable anvil I, arranged for joint operation substantially as and for the purpose set forth.

2. Having the cam E, slotted radially and

provided with a bar *c*, and screw *d*, substantially as shown, for the purpose of rendering the cam adjustable to move the saw a greater or less distance according to the size of its teeth.

3. The arrangement of the gage K, formed of the lips *f*, *f*, at the end of the plate L, and the slide M, in connection with the cam E, hammer H, and anvil I, for the purpose specified.

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