J. GEHR.

Sawing-Machine.

No. 160,892. Patented March 16, 1875.

Fig. 1.

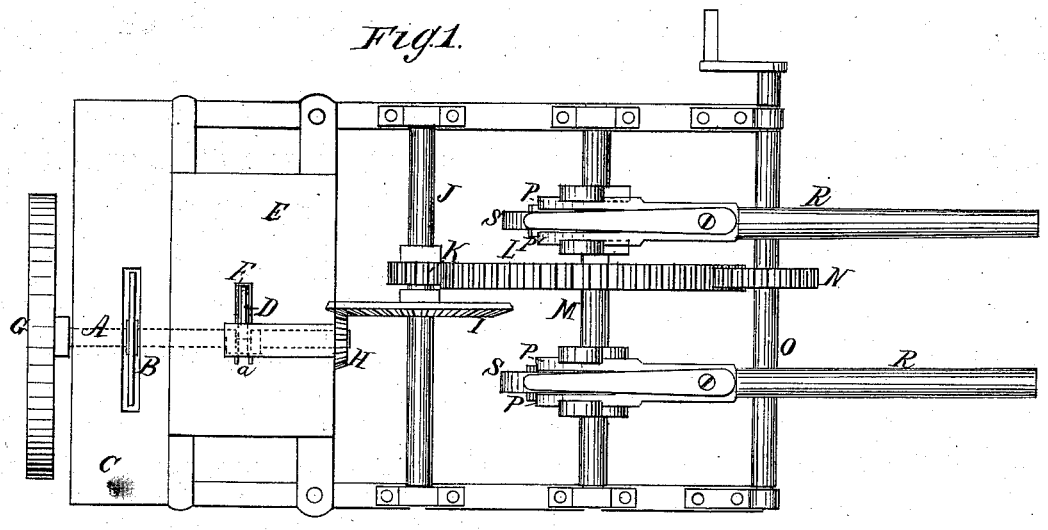


Fig. 2.

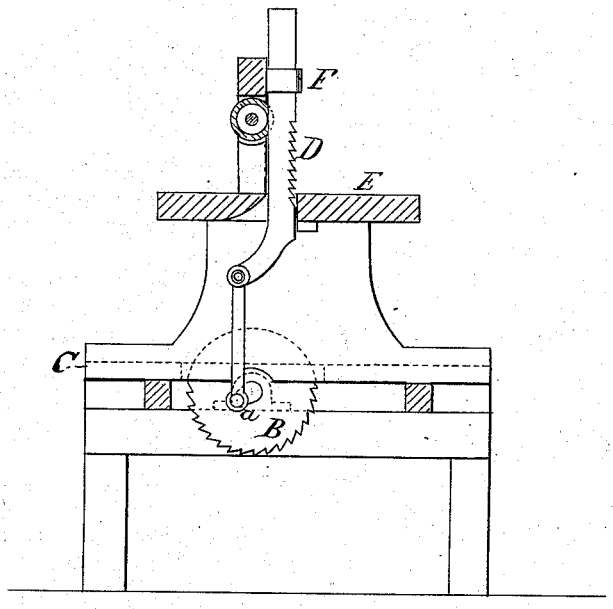
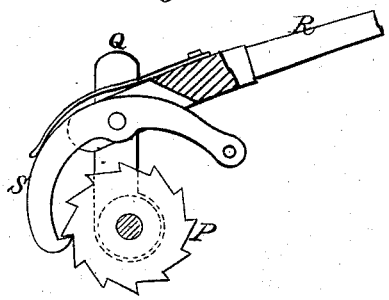


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN GEHR, OF CLEAR SPRING, ASSIGNOR TO HIMSELF AND JOSEPH R. HAINES, OF GREEN-SPRING FURNACE, MARYLAND.

IMPROVEMENT IN SAWING-MACHINES.

Specifi ation forming part of Letters Patent No. **160,892**, dated March 16, 1875; application filed November 23, 1874.

To all whom it may concern:

Be it known that I, JOHN GEHR, of Clear Spring, in the county of Washington and State of Maryland, have invented an Improvement in Sawing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a plan view. Figs. 2 and 3 are vertical sections.

The invention relates to sawing-machines which may be operated by hand or other power; and consists in their improvement, as hereinafter fully described, and pointed out in the claim.

I employ the saw-shaft A, having the rotary saw B projecting through the work-table C, and on the crank *a* I pivot the jig-saw D, which is then passed up through the superposed work-table E and guide-loop F. G is the balance-wheel on one end, and H the bevel-pinion on the other end, the latter connecting with any suitable drive-mechanism.

By thus combining with two work-tables, C E, placed at different altitudes, a rotary and a jig saw operated from the same drive-shaft, I can ordinarily run both saws by the same power that would be employed with one.

I connect the bevel-pinion H with a crown-wheel, I, on a cross-shaft, J, which shaft is driven by the gears K L, whose shaft may be turned by a pulley on the shaft M, or by a pinion, N, on a crank-shaft, O.

This forms a train of actuating mechanism that is operated by hand with great facility, is so simple as not to readily get out of order, and withal necessitates so few pieces as to economize expense.

Where hard and heavy timber is being sawed, and greater than the usual power is required, I place loosely on the shaft M the two ratchet-wheels P P, and the two yokes Q Q. In the latter are rigidly clamped the bars R R, which have bifurcations, between which are pivoted spring-pressed pawls S S. The latter have rear shanks, perforated and provided with cords; or may be unlocked and held up from their ratchet-wheels in any suitable manner.

By combining with shaft M these devices a great purchase and leverage are obtained, so that two men will operate on heavy work slowly, but with little difficulty.

It will thus be perceived that I produce a machine which may do rapidly any light sawing, and slowly any heavy work, all by manual force, while, if continuous sawing is required, horse or other power may be readily employed from the shafts M or O.

Having thus described my invention, what I claim as new is—

The combination, with the tables C E placed at different altitudes, of the single shaft A, operating a jig-saw and a rotary saw at one side of the crank *a*, as and for the purpose specified.

JOHN GEHR.

Witnesses:
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