October 22, 1913.

DRAWING

3,858

A careful search has been made this day for the original drawing or a photolithographic copy of the same, for the purpose of reproducing the said drawing to form a part of this book, but at this time nothing can be found from which a reproduction can be made.

Finis D. Morris,

Chief of Division E.

AWK

UNITED STATES PATENT OFFICE.

CALVIN STIGLEMAN AND AUSTIN SEELY, OF MADISON COUNTY, ILLINOIS.

METHOD OF STRAINING SAWS OF SAWMILLS WITHOUT GATE.

Specification of Letters Patent No. 3,858, dated December 16, 1844.

To all whom it may concern:

Be it known that we, CALVIN STIGLEMAN and AUSTIN SEELY, of the county of Madison and State of Illinois, have invented a new and Improved Mode of Running Saws, and do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the accompanying drawing, making a part of this specification, which is a view.

(A) is a cylinder. (*n*) is a piston rod on one end of which is the piston (P) of such diameter that the steam will act upon it with sufficient force to strain the saw, on the other end is a cross head (C R) running in guides (B).

(C) is a larger cylinder.

(N) is a piston rod on one end of which is a piston of such diameter that the steam will act upon it with a force about three times as great as that upon the piston P on the other end is a cross head (C R) running in guides (D). The crossheads C R are connected together by the saw (*m*). To the lower piston is attached a pitman (G) which drives a shaft below for the purpose of turning the motion, working the valves, &c., &c. The upper end of the upper cylinder has no head. The lower end has a head through which the piston rod *n* works steam tight. The space between this head and the piston P has a constant communication with the boiler while running. The steam forcing the piston up in its ascent, and the piston forcing the steam back to the boiler in its descent thus having a constant pressure upward on the piston P both in its ascent and descent. The lower end of the cylinder C has no head; the upper end has a head through which the piston rod N works steam tight; the space between this head and the piston has communication with the boiler and not with the atmosphere in its descent, and the reverse in its ascent. (S) steam pipe. (O) scapement pipe.

By a proper arrangement of a valve or valves the steam can be made to overcome the momentum of pitman, pistons, crossheads, and saws, so as to produce an equilibrium at the two extremities of their motion and thereby insure an easy and regular motion through the whole machine. For example if the steam be let into the lower cylinder a little before she completes her upward motion she will have to complete it in opposition to the steam, and if the steam be let out again before she completes her downward motion she will have to complete it in opposition to the steam in the upper cylinder.

What we claim as our invention and desire Letters Patent for is—

The adaptation and application of the upper cylinder in straining and running of saws without a frame, and for all other purposes for which it can be used to advantage as represented in the drawing herewith transmitted.

CALVIN STIGLEMAN.
AUSTIN SEELY.

Witnesses:

ROBERT DUNLAP,
J. G. CAMERON.