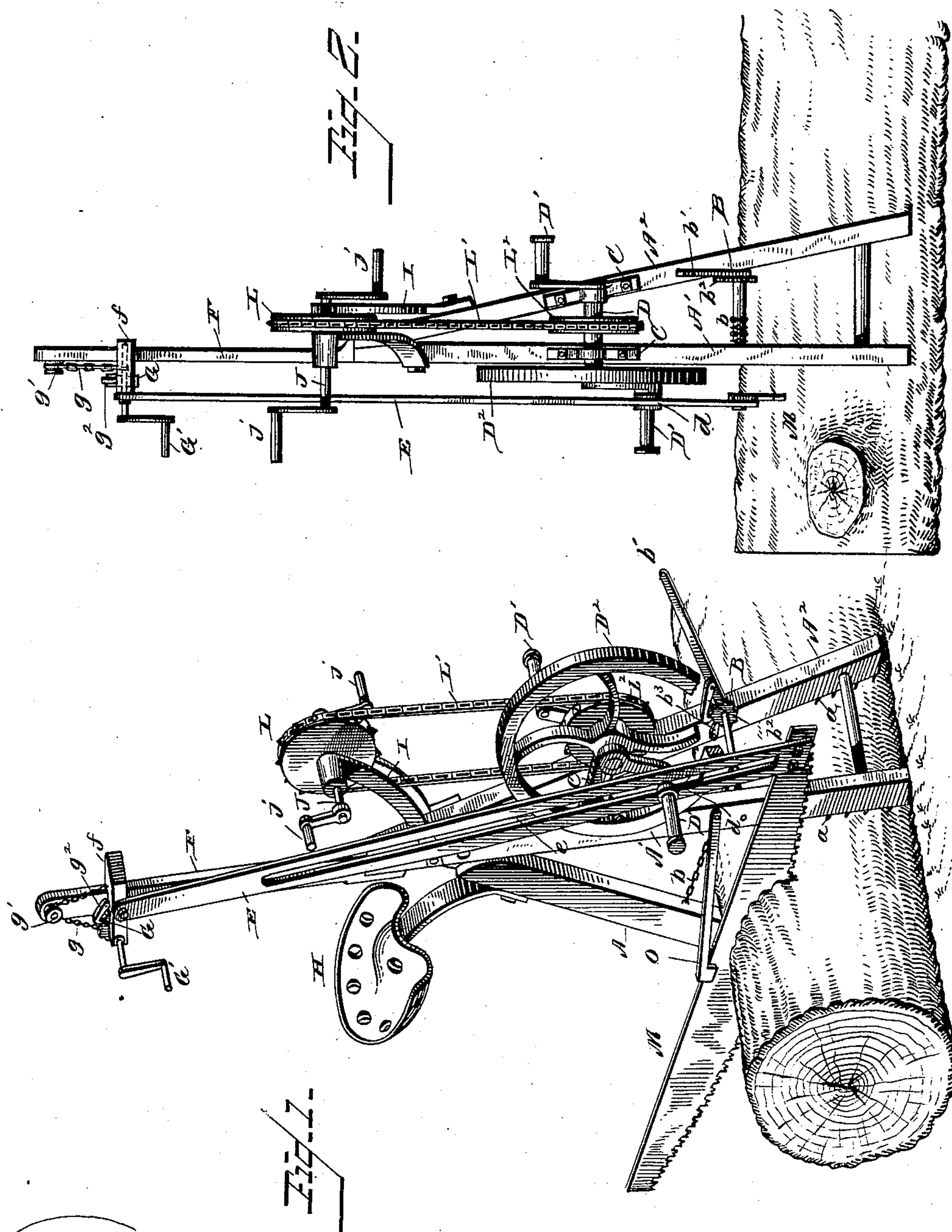


(No Model.)

W. W. SMITH.  
SAWING MACHINE.

No. 326,343.

Patented Sept. 15, 1885.



Witnesses  
Wm. Shiden.  
R. B. Turpin.

Inventor  
William W. Smith.  
By his Attorney  
Frank Sheehy.



# UNITED STATES PATENT OFFICE.

WILLIAM W. SMITH, OF BOYNE, MICHIGAN.

## SAWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 326,343, dated September 15, 1885.

Application filed April 24, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM W. SMITH, a citizen of the United States, residing at Boyne city, in the county of Charlevoix and State of Michigan, have invented certain new and useful Improvements in Sawing-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-  
10 pertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specifica-  
15 tion.

The invention relates to machines for saw-  
ing; and the novelty consists in the construc-  
tion, arrangement, and adaptation of parts, as  
will be more fully hereinafter set forth, and  
specifically pointed out in the claims.

20 The invention has for its object to produce  
a machine which will allow the transmission  
of force to a reciprocating or crosscut saw  
with the greatest economy, one which is dura-  
ble, useful, and simple in operation. It is  
25 illustrated in the accompanying drawings,  
which form a part of this specification, and in  
which—

Figure 1 is an elevation in perspective, and  
Fig. 2 an elevation viewed from another point.

30 Referring to the drawings, A A' A<sup>2</sup> design-  
ate the three legs of a tripod, having teeth *a*  
upon their inner faces, and adapted to be se-  
cured to the log or other article to be sawed  
by a chain, *b*, and a windlass, B. The wind-  
lass is journaled in two of the legs of the tripod,  
35 and the chain connects with the remaining,  
and when force is applied to the windlass by  
means of the lever *b'* and dog *b''* the teeth are  
forced into the log to give the tripod a firm  
40 bearing, a dog or pawl, *b'''*, serving to prevent  
the windlass from moving back.

Journaled in proper brackets, C, secured  
upon the legs A' A<sup>2</sup> of the tripod, is a shaft,  
D, which carries pedal-levers D' D' and a fly-  
45 wheel, D<sup>2</sup>. A roller or sleeve, *d*, arranged  
upon one of the levers D', is loosely received  
in a slot, *e*, of an oscillating arm, E, carrying  
upon its lower end the saw M. This arm is  
50 pivoted in movable bearings or guides *f*, in a  
standard-frame, F, with freedom for vertical

movement in said guides. A rope or cord, *g*,  
attached to the upper end of the arm E, passes  
over a pulley, *g'*, upon the upper portion of  
the standard-frame, and thence down and over  
a windlass, G, journaled in said frame *f*, a  
55 hand-crank, G', upon said shaft allowing the  
saw to be elevated at will, and a dog, *g''*, con-  
trolling the windlass.

An operator's seat, H, is arranged upon the  
tripod, so as to place the pedal-levers and the  
60 crank G' within convenient reach of the op-  
erator.

As thus far described the saw is given its  
motion through the medium of the pedal-le-  
vers; but I combine a hand-power with this  
65 arrangement, which I will now describe.

Upon brackets I is journaled a shaft, J, hav-  
ing hand-cranks *j* upon either side, the said  
shaft carrying a sprocket-wheel, L, which, by  
a chain, L', is connected to a sprocket-wheel,  
70 L<sup>2</sup>, upon the shaft D. By this construction  
the operator may combine both hand and foot  
action when he occupies the seat, and may  
for some service operate the hand-power when  
standing upon the ground.

O designates an ordinary pivoted saw-guide. 75

In practice, motion having been given to  
the saw it is allowed to gravitate as fast as the  
work will permit, the standard E sliding down  
the guides of the frame F with freedom. 80  
When it is desired to elevate the saw, the wind-  
lass above is used and the dog will hold the  
saw elevated when not in use.

Modifications in details of construction may  
be made without departing from the principle 85  
or sacrificing the advantages of my invention,  
the essential features of which will be readily  
understood from the foregoing description,  
taken in connection with the drawings.

What I claim as new is— 90

1. A sawing-machine having a tripod-frame  
with the legs or branches thereof provided  
with teeth adapted to engage a log, a wind-  
lass journaled in two of the legs and connected  
with the opposite leg by means of a chain, sub- 95  
stantially as specified.

2. A tripod-frame having a windlass jour-  
naled in two of its legs or branches, a chain  
connecting the opposite leg with the windlass,  
a ratchet on the said windlass, a pawl engag- 100



ing the ratchet, and a hand-lever carrying a pawl adapted to engage the ratchet and rotate the windlass, whereby the legs of the tripod may be brought to engage a log, substantially as specified.

3. The combination, with the tripod-frame, of the frame F rising therefrom, and provided with the pulley *g'* at its upper end, the slide-frame *f*, arranged on the said frame F, and carrying a drum, pawl, and ratchet, a chain connecting the slide-frame with the drum and passing over the pulley *g'*, the slotted saw-frame E, pivoted at its upper end to the slide-frame *f*, and the pedal-levers adapted to vibrate the saw-frame by engaging the slot therein, substantially as specified.

4. In a sawing-machine, a horizontally-vibrating slotted saw-frame pivoted at its upper end to a vertically-movable frame or block, a shaft journaled in the main frame and having one of its pedal-levers passing through the slot in the saw-frame to vibrate the same, a

sprocket-wheel arranged on the pedal-lever shaft, a sprocket-wheel having a crank-arm and journaled above the pedal-lever shaft, and 25 a chain connecting the said sprocket-wheel, whereby the pedal-levers and hand-levers may be operated simultaneously, substantially as specified.

5. In a sawing-machine, the combination, 30 with a main frame, of a vibratory saw-frame longitudinally slotted and pivoted at its upper end, a shaft having pedal-levers journaled in the main frame and adapted to vibrate the said saw-frame and saw by having one of the 35 pedal-levers engage the said saw-frame, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM W. SMITH.

Witnesses:

NATHANAL G. SMITH,  
FRED TEMPLE.