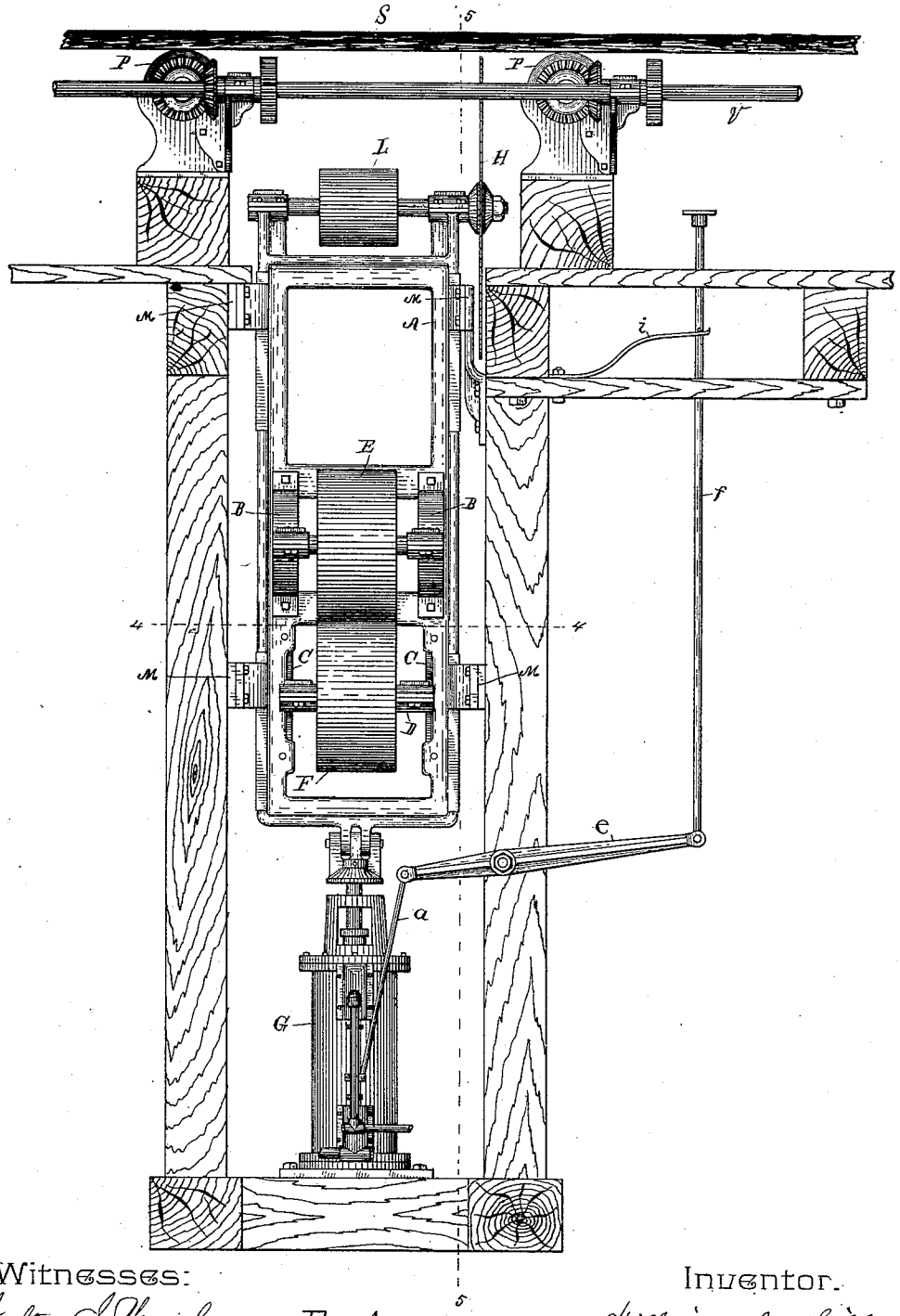
(No Model.) 2 Sheets—Sheet 1.

W. E. HILL.

SLAB SAWING MACHINE.

No. 428,722. Patented May 27, 1890.



Witnesses:
Walter S. Wood
James Baumann

Fig. 1

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William E. Hill
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Att'y.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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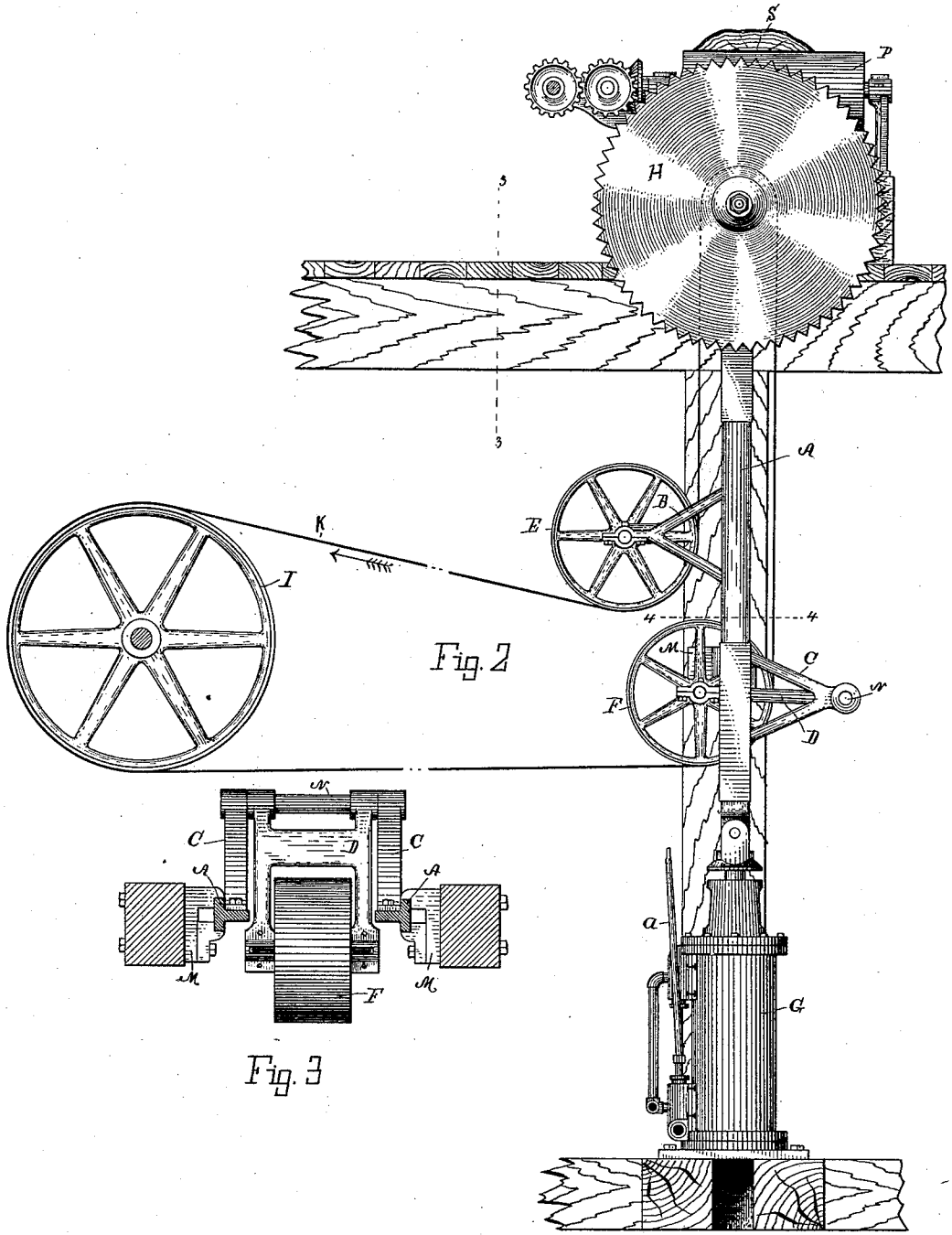


Fig. 2

Fig. 3

Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM E. HILL, OF KALAMAZOO, MICHIGAN.

SLAB-SAWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 428,722, dated May 27, 1890.

Application filed March 5, 1890. Serial No. 342,718. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. HILL, a citizen of the United States, residing at Kalamazoo, county of Kalamazoo, State of Michigan, have invented a new and useful Slab-Sawing Machine, of which the following is a specification.

This invention relates to that class of sawing-machines sometimes termed "jump-saws," which are employed for cutting up slabs; and it has for its object the below described and claimed improvements, said improvements more especially relating to the apparatus for running the saw in its relation to the vertically-playing frame upon which said saw is mounted. The term "jump-saw" is a term frequently used by saw-mill men in speaking of this class of saws, for the reason that the saw in its operation is caused to jump up in contact with the slab or timber which is to be sawed.

In the drawings forming a part of this specification, Figure 1 is a sectional elevation on line 3 3 in Fig. 2. Fig. 2 is a sectional elevation on line 5 5 in Fig. 1; and Fig. 3 is a section on line 4 4 in Figs. 1 and 2, looking from a point above.

Referring to the lettered parts of the drawings, the rectangular frame A plays vertically in the slide-bearings M, which bearings are attached to a frame-work in the mill. The saw H is mounted in suitable bearings in the upper end of the frame A. Below the saw is a belt-wheel E, having bearings in the ends of the fixed brackets B, said brackets projecting out from the frame A. Below the brackets B are fixed brackets C, projecting from the frame A in an opposite direction to that of the brackets B. An axis N connects the outer ends of the brackets C, and upon said axis is pivoted a belt-wheel frame D, and in the free end of said frame a belt-wheel F has bearings. (See Fig. 3.)

In Fig. 2 is a belt-wheel on a power-shaft, and to said power-shaft, of course, suitable power is applied for running the saw A.

The belt K, Fig. 2, is passed around the belt-wheel L of the saw H, and around the belt-wheel I of the power-shaft. The upper part of the belt comes against the lower side of the belt-wheel E and the lower part of said belt comes against the lower side of the belt-wheel F. By this means the belt extends horizontally from the belt-wheel I, passes around the wheels E and F, and extends vertically upward to the saw.

In Fig. 1 G is an engine of a well-known construction, located in a vertical position beneath the saw-frame A, and to the free end of the piston of said engine is attached the lower end of the frame A.

At *a* is a rod attached to the throttle of the engine. The upper end of this rod is attached to the end of a walking-beam *e*, and *f* is a rod attached to the other end of the walking-beam and comes up through the floor of the mill in a convenient position for the operator to press down upon with his foot.

At *i* is a spring which brings this rod up when the pressure is removed from it; but so far as this particular arrangement for operating the throttle is concerned any other operative means may be employed.

The slab S is carried over the saw H by a series of rollers P, two of these rollers being here shown. These rollers being of the ordinary construction, no detail description is here given, further than that they are operated by the geared power-shaft *v*.

In the operation the slab which has been sawed off from the log in another part of the mill is carried by the rollers P over the jump-saw H, and when in the proper position the operator lets steam on the engine, which raises the saw H, bringing it in contact with the slab. By this means the slab can be sawed up in any desired lengths. The degree of the upward thrust of the saw and the time it is allowed to remain in a given position are readily controlled by the throttle in letting on as little or much steam as desired and shutting it off at will. When the steam is shut off, the saw is of course in its down position, as in Figs. 1 and 2. It will be observed that the belt-wheel F, from the fact that it is mounted upon a vertically-playing frame D, acts as a belt-tightener when the saw-frame is raised up; otherwise, since both the belt-wheels E F would be raised with the saw-frame, the belt K would be loose.

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

1. The combination of the reciprocating

frame bearing the saw, the brackets projecting from said frame, the upper belt-wheel having bearings in the ends of the upper brackets, the vertically-swinging frame pivoted to the lower bracket, the belt-wheel having bearings in the end of said frame, a power-shaft, and belt, substantially as set forth.

2. In a jump-saw machine, the combination of the saw-frame bearing two belt-wheels, a swinging frame attached to the saw-frame and in which swinging frame one of said belt-wheels has bearings, a power-shaft, and a belt running from said power-shaft to the saw and passing around the belt-wheels, which have bearings in the saw-frame and swinging frame, substantially as set forth.

3. The combination of the engine, the reciprocating saw-frame attached at the lower end to the piston-rod of said engine, the brackets projecting from said frame, the upper belt-wheel having bearings in the ends of the upper brackets, the vertically-swinging frame pivoted to the lower bracket, the belt-wheel having bearings in the end of said frame, a power-shaft, and belt, substantially as set forth.

In testimony of the foregoing I have hereunto subscribed my name in presence of two witnesses.

WILLIAM E. HILL.

Witnesses:
L. N. BURKE,
B. W. SHEPARDSON.