(No Model.) 4 Sheets—Sheet 1.

J. PAUL.

BAND SAW MILL.

No. 418,422. Patented Dec. 31, 1889.

Fig. 1.

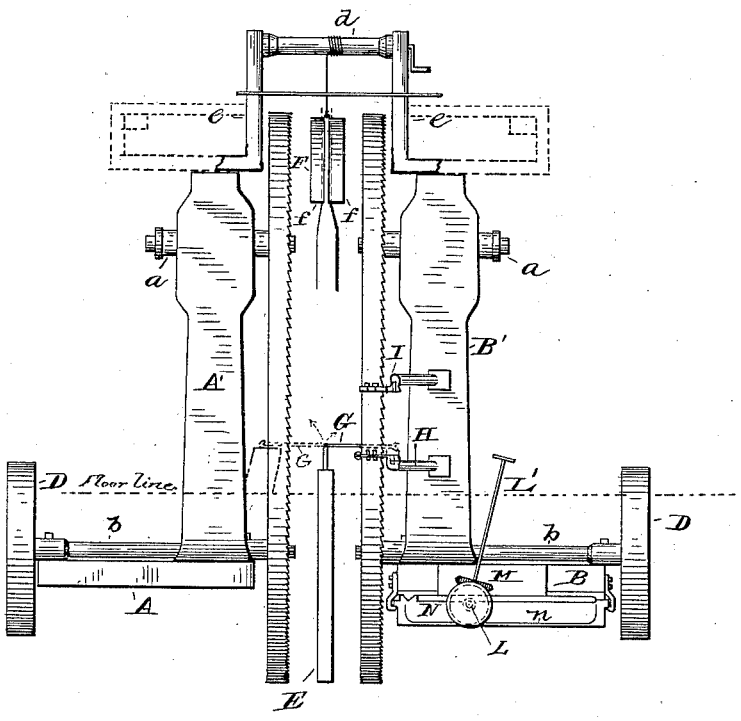


Fig. 3.

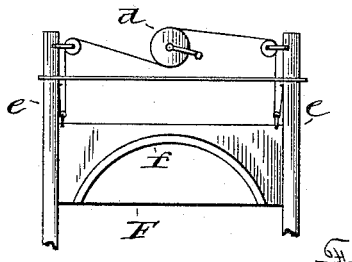


Fig. 4.

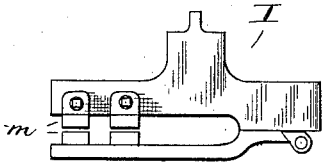
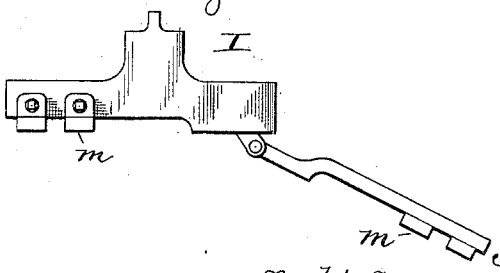


Fig. 5.



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(No Model.) 4 Sheets—Sheet 2.

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Fig. 2.

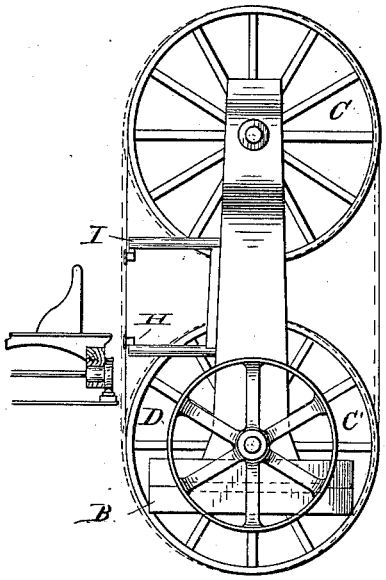

Fig. 6.

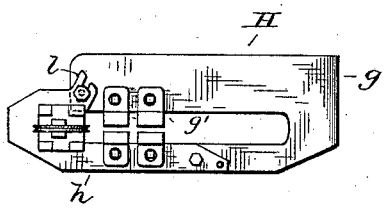

Fig. 7.

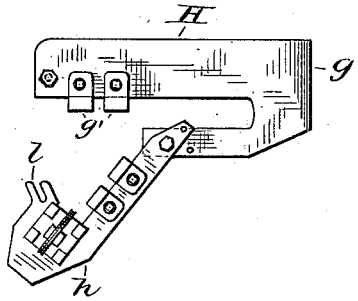

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Fig. 8.

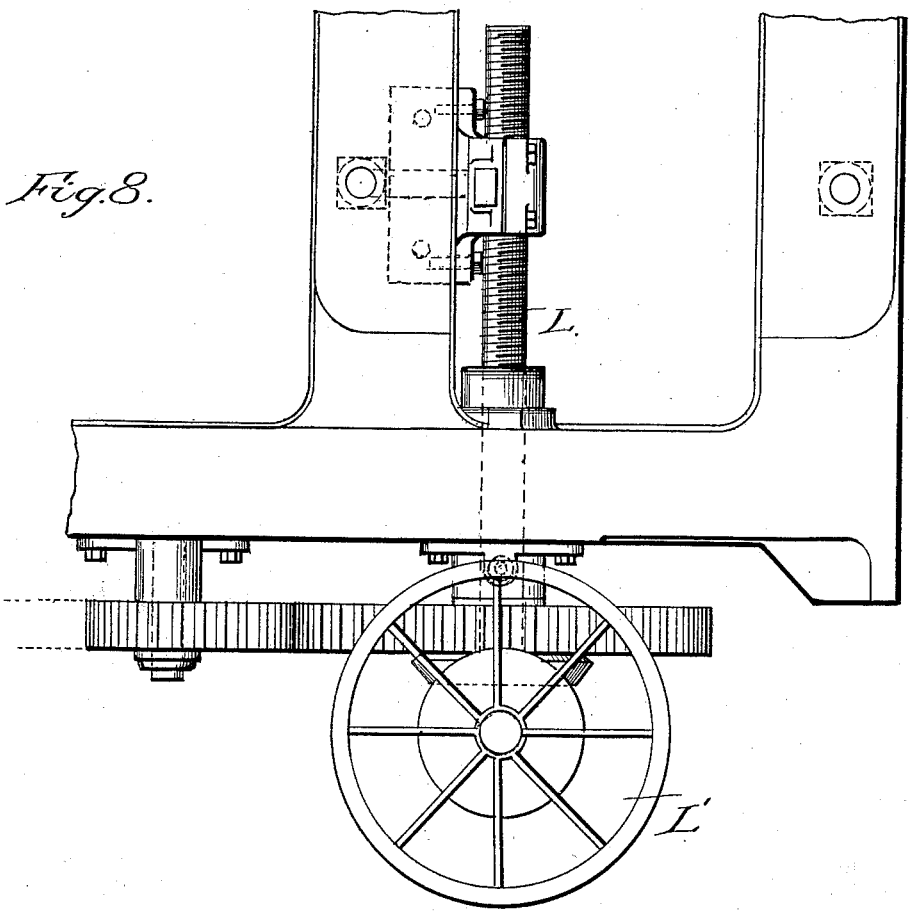

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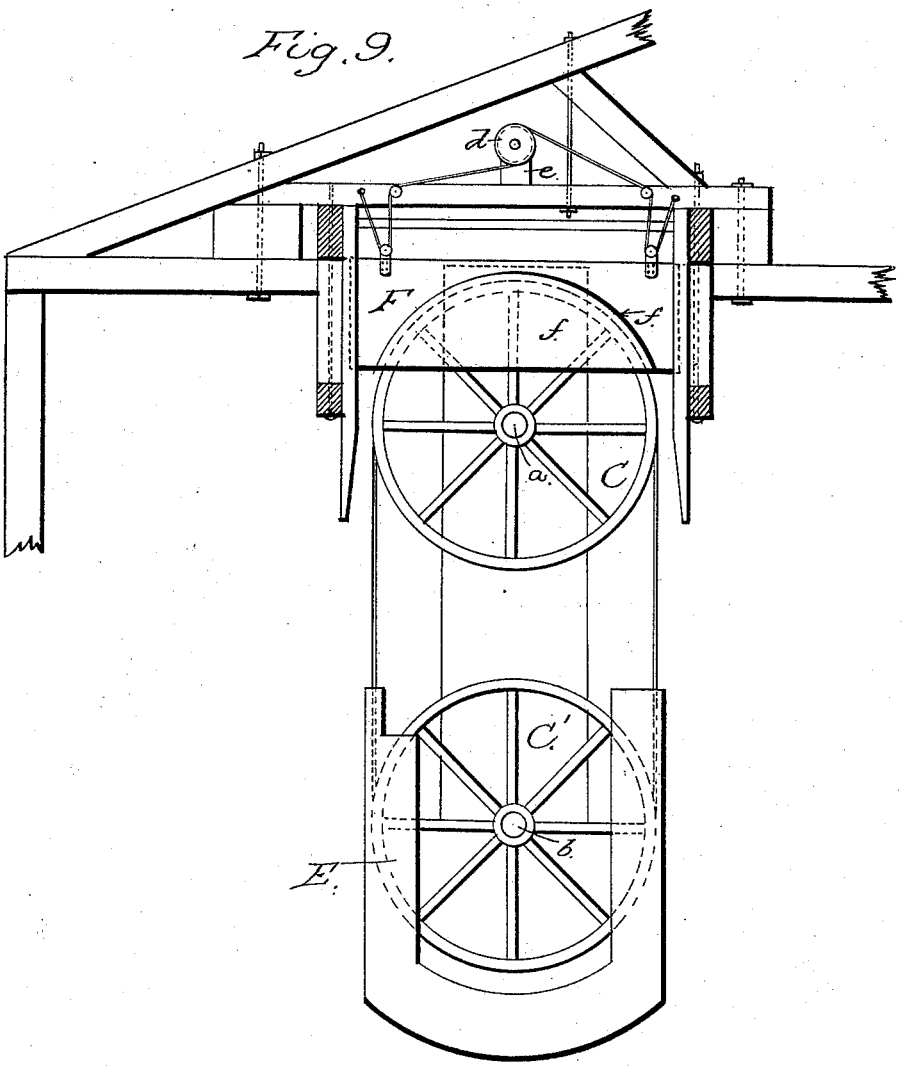
Fig. 9.



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UNITED STATES PATENT OFFICE.

JOHN PAUL, OF LA CROSSE, WISCONSIN.

BAND-SAW MILL.

SPECIFICATION forming part of Letters Patent No. 418,422, dated December 31, 1889.

Application filed June 22, 1889. Serial No. 315,210. (No model.)

To all whom it may concern:

Be it known that I, JOHN PAUL, a citizen of the United States, residing at La Crosse, in the county of La Crosse and State of Wisconsin, have invented certain new and useful Improvements in Band-Saw Mills; and I do hereby 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 appertains to make and use the same.

Figure 1 represents an elevation of my improved band-saw mill. Fig. 2 is a side view. Figs. 3 to 7, inclusive, represent details of construction to be hereinafter fully described. Fig. 8 is a detail of a portion of the frame and saw-carriage, showing the screw and adjunctive parts for operating the same. Fig. 9 is a sectional view showing the upper and lower partitions and the preferred manner of mounting the same.

My invention relates to band-saw mills; and it consists in the constructions and combinations of devices which I shall hereinafter fully describe, and point out in the claims.

Referring now to the drawings, A represents a bed-plate or frame having an upward extension or arm A′, and B indicates another bed-plate or frame placed beside the first frame and having an extension or arm B′, the said frames and arms being provided with bearings for the shafts *a* and *b* of the pulleys C, C′, and D.

The pulleys C and C′ are on the inner ends of their respective shafts, which also carry the band-pulleys, and upon these pulleys C C′ the band-saws are placed in the usual manner, these saws being placed far enough apart so that a stationary partition E may be placed in a central position between them below the line of cut, while a second partition F is placed between the upper pulleys C above the line of cut. This arrangement prevents either of the saws, if run off its pulley, from coming in contact with and injuring the other saw or machinery. The upper partition F is not fixed, but is a movable one, and is suspended by means of a cord or chain and sheaves or pulleys from a drum *d*, journaled between standards *e*, which may be fitted to the roof-timbers, as shown in Fig. 9, or in any other well-known manner, and said partition F is formed with curved or segmental extensions *f*, projecting from its sides and serving to catch either saw in the event of its running off its top pulley. These curved projections *f* and the movable partition, drum, chain, or connection also facilitate the raising and lowering of the saws when being taken off and put on. The upper partition F is also capable of movement sidewise at the lower end of its guides, which enables the operator to put the saw on and take it off in a much more contracted space than could be done if the partition had but a vertical movement.

On the top of the partition E rests a platform G, which is hinged to any well-known form of support, and when closed, as shown in Fig. 1, protects the saws and lower pulley D from bark, slabs, and sawdust, that would otherwise fall between the saws, and when said platform is thrown back into the dotted position, Fig. 1, it enables the operator to put on and take off the saws without inconvenience or obstruction.

In order to guide the saw in a line with the cut, it is necessary to have the saw-guides practically close to the saw. The "set" in the saw-teeth makes the cutting-edge thicker than the body of the saw, and as it is necessary to pass the edge through the guides in order to get the saws off and on the wheels it is necessary to have guides that may be readily opened to freely admit the passage of the saws, and when closed and locked will be the required distance from the saws. These guides H and I, which are herein shown as being secured to the vertical arm of the main frame, have each a hinged or movable section, which is adapted to be swung outward to release the saw. The lower guide H consists of a fixed arm or section *g*, having the inwardly-projecting lugs *g′*, and an arm or section *h*, which is pivoted at one end to the arm or section *g*, and is provided with lugs corresponding with the lugs *g′*, and between the adjoining faces of these lugs the saw-blade travels. In the outer end of the pivoted arm or section *h* is mounted a sheave or pulley. When the arm is closed, as shown in Fig. 6, it is adapted to rest against the back edge of the saw-blade, as shown in Fig. 1, the said arm or section *h*

being locked in the position shown in said figure by a bolt in the arm or section *g* passing through a slotted projection *l* of the arm or section *h*. The upper guide I has also a fixed and a movable arm or section, and said fixed and movable arms have lugs *m*, between which the saw-blade runs, whereby said blade is guided in its movements. These constructions enable the movable arms of the guides to be swung outward clear of the saw-blade, and thereby enable the operator to readily take off and put on the saws.

Any well-known means—such as the screw L, hand-wheel L′, and bevel-gears M and N—may be employed and connected with the movable bed-plate of one of the main frames of the saw-mill, and which, when operated, causes the said bed-plate to move upon its guides *n* to regulate the thickness of board or plank to be cut, the purpose in every instance being the placing of two single band-saw mills upon independent and separate bed-plates or frames, so that the saws may be adjusted with relation to each other, whereby two boards or planks of different thickness may be cut from the same side of the log or timber at one operation.

I do not claim, broadly, two or more band-saws for cutting two or more boards or planks simultaneously from the same side of a log, but limit myself to the construction, combination, and arrangement of devices set out in the claims.

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

1. The combination, with independent and single saw-mills placed side by side and carrying pulleys upon which band-saws are mounted, of a partition between the lower portions of the saws below the line of cut and adapted to prevent the saws, when run off their pulleys, coming into contact with each other or the machinery of the mill, substantially as described.

2. The combination, with independent and single saw-mills having band-saws on adjoining sides, of a partition between the upper portions of the saws, said partition having curved or segmental lateral extensions adapted to receive the saws, if run off their pulleys, and to facilitate the putting on and taking off of said saws, substantially as described.

3. The combination, with the independent saw-mills having the shaft upon which the pulleys are mounted and band-saws upon said pulleys, of a partition between the adjacent lower edges of the saws, a partition between the adjoining upper portions of said saws, curved or segmental extensions from the upper partition, and means for raising and lowering the upper partition, consisting of a drum, cord, or connection and guide-pulleys, substantially as described.

4. The combination of a band-saw mill, a second band-saw mill adjacent to the first one and having its bed-plate or frame mounted on guides, means for adjusting the said bed-plate and saws with relation to the bed-plate and saws of the opposite mill, and partitions between the upper and lower adjacent edges of the saws, said upper partition being laterally adjustable to enable the saws to be taken off and put on in the space between them, and means for adjusting the upper partition vertically, substantially as described.

5. The combination, with the frame, shafts, pulleys, and saws of a saw-mill, of saw-guides, each consisting of a fixed and movable section, the former being secured to the frame of the mill and the latter being pivoted to the fixed section, and a pulley in the outer end of the movable section adapted to bear against the back of the saw-blade, and means for locking the two sections of the guide together, substantially as described.

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

JOHN PAUL.

Witnesses:
R. H. PAUL,
J. L. ERICKSON.