No. 762,095. PATENTED JUNE 7, 1904.

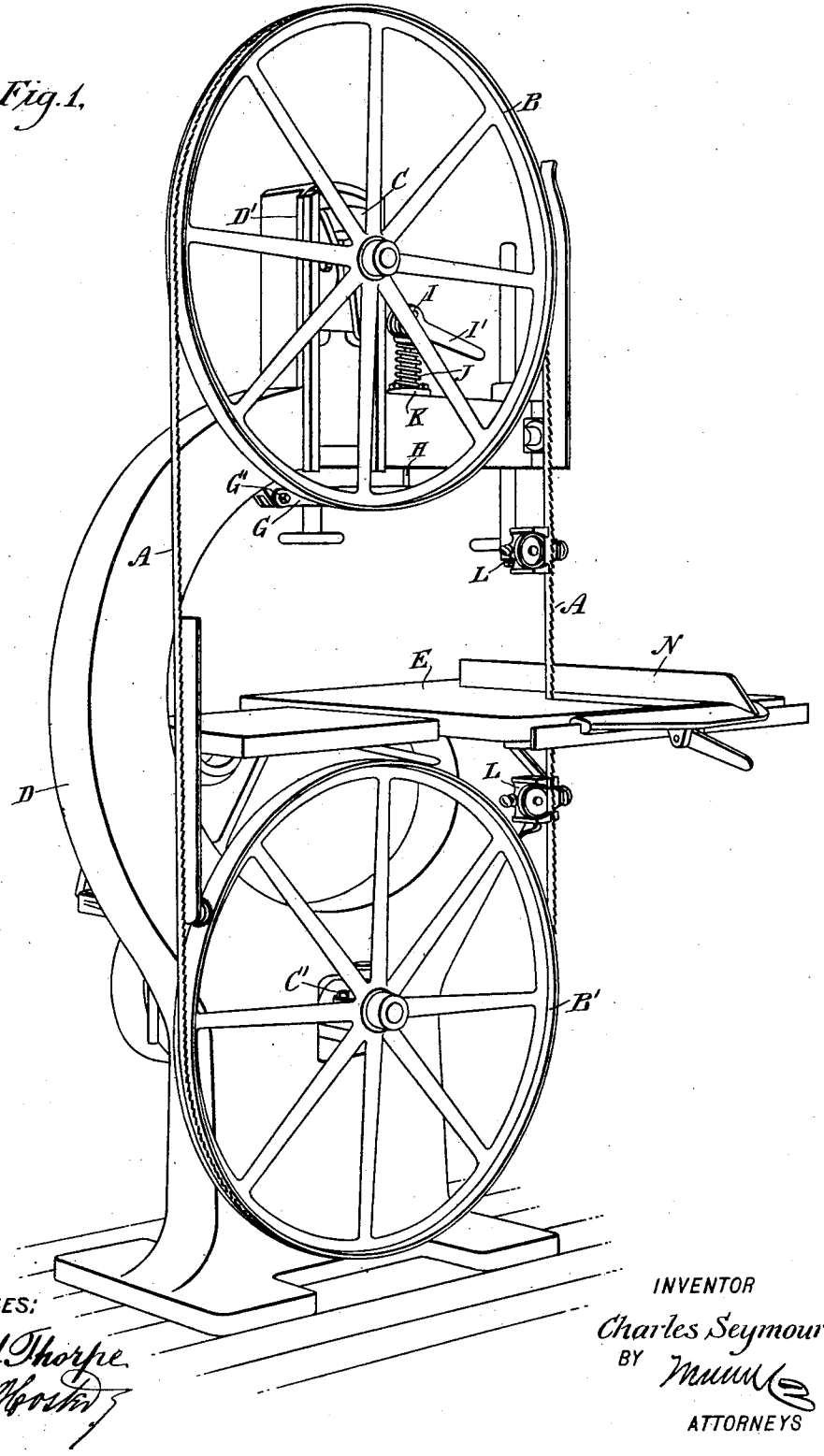
C. SEYMOUR.

BAND SAWING MACHINE.

APPLICATION FILED FEB. 12, 1904.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES:

Edward Thorpe.

Percy J. Hoskins

INVENTOR

Charles Seymour

BY Munn & Co

ATTORNEYS

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APPLICATION FILED FEB. 12, 1904.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 2,

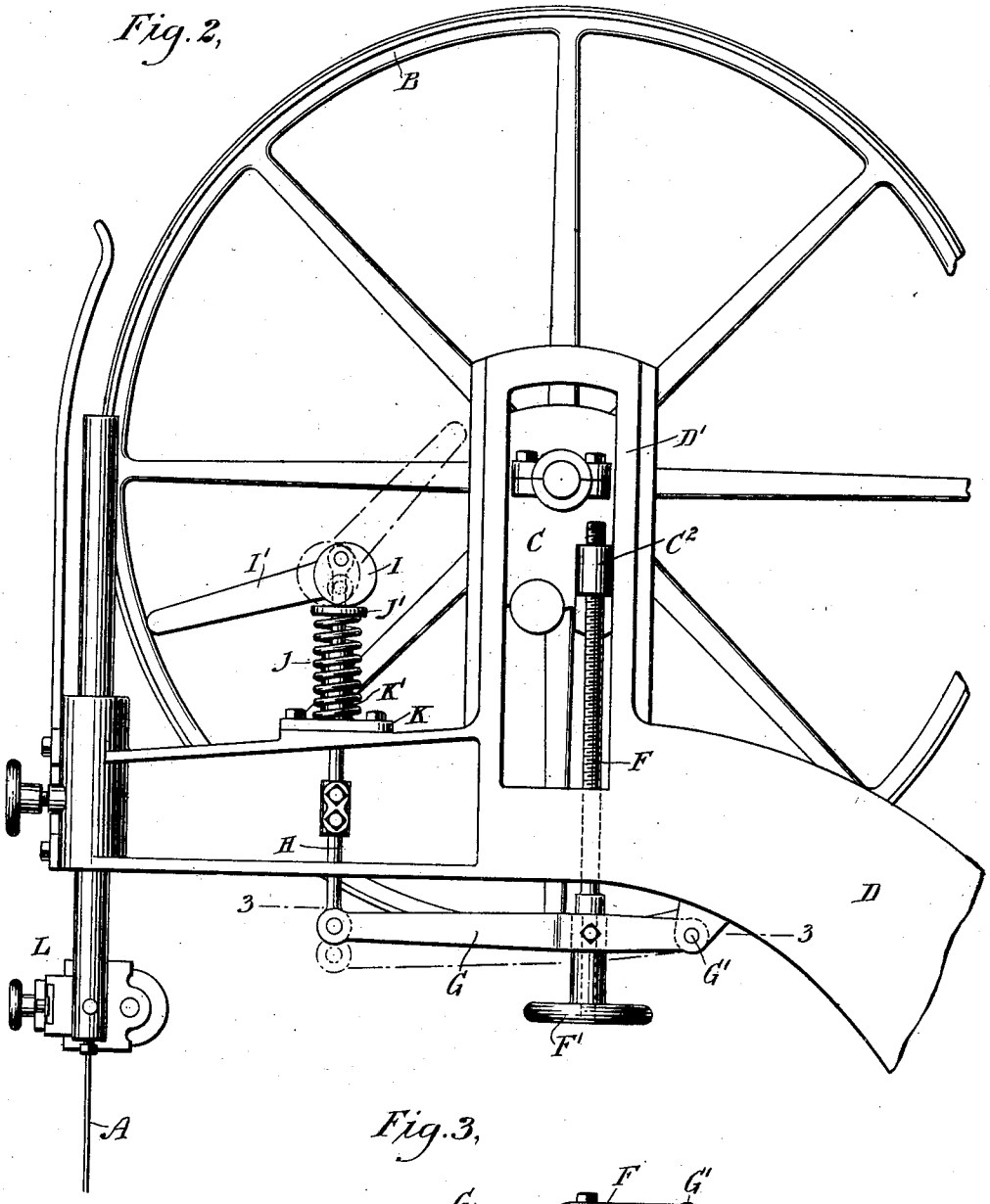


Fig. 3,

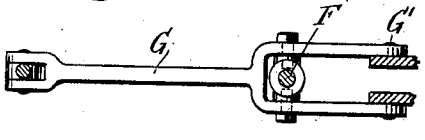
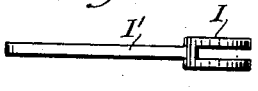


Fig. 4.



WITNESSES:

Edward Thorpe

Reg. Hosted

INVENTOR

Charles Seymour

BY

Munn & Co

ATTORNEYS

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UNITED STATES PATENT OFFICE.

CHARLES SEYMOUR, OF DEFIANCE, OHIO, ASSIGNOR TO THE DEFIANCE MACHINE WORKS, OF DEFIANCE, OHIO.

BAND SAWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 762,095, dated June 7, 1904.

Application filed February 12, 1904. Serial No. 193,322. (No model.)

To all whom it may concern:

Be it known that I, CHARLES SEYMOUR, a citizen of the United States, and a resident of Defiance, in the county of Defiance and State of Ohio, have invented new and useful Improvements in Band Sawing-Machines, of which the following is a full, clear, and exact description.

The invention relates to woodworking machinery; and its object is to provide certain new and useful improvements in band sawing-machines whereby the proper tension is given to the saw-band to allow the latter to yield in case the cutting edge strikes a knot or the like in the work, thus preventing injury to the saw-band and other parts of the machine, the arrangement also permitting of placing the saw-band quickly in position on the wheels or removing it therefrom whenever it is desired to do so for sharpening the band or replacing it by another.

The invention consists of novel features and parts and combinations of the same, as will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the improvement. Fig. 2 is an enlarged rear side elevation of the same. Fig. 3 is a sectional plan view of the same on the line 3 3 of Fig. 2, and Fig. 4 is a plan view of the cam-lever.

The endless saw-band A passes over band-wheels B and B′, journaled in bearings C and C′, of which the bearing C′ is fixed on the lower portion of a frame D, while the other bearing, C, for the upper band-wheel B is mounted to slide vertically in guideways D′, forming part of the main frame D. The latter supports in the usual manner a table E, over which passes the work to be sawed by the downwardly-traveling run of the saw-band A, as will be readily understood by reference to Fig. 1.

The bearing C for the upper band-wheel B is provided on its rear face with a nut C^2, (see Fig. 2,) and in this nut screws the upper end of a screw-rod F, mounted to turn in a lever G, fulcrumed at G′ on the main frame D, the free end of the said lever being pivotally connected with an upwardly-extending rod H, mounted to slide in suitable bearings arranged on the main frame D, the free end of the said lever being pivotally connected with an upwardly-extending rod H, mounted to slide in suitable bearings arranged on the main frame D.

On the upper end of the rod H is fulcrumed a cam-lever I, having a handle I′ adapted to be taken hold of by the operator, and the peripheral face of the cam of the lever I engages a washer J′, held on the upper end of a spring J, resting with its lower end on a suitable stand K, attached to the main frame D and provided with a hollow offset K′, through which passes the rod H and on which is coiled the lower portion of the spring J. By the arrangement described a spring-tension device is provided for giving the desired tension to the saw-band A, at the same time allowing the bearing C to yield in its guideways in case the cutting edge of the saw runs into a knot in the work, thus preventing injury to the saw-band and other parts of the machine.

When it is desired to remove the saw-band A from the band-wheels B and B′, then it is desirable to lower the band-wheel B, and for this purpose it is only necessary for the operator to swing the cam-lever I over into the position shown in dotted lines in Fig. 2, whereby the rod H is lowered and a downward-swinging motion is given to the lever G, which by the screw-rod F imparts a downward-sliding motion to the bearing C and the wheel B without disturbing the position of the spring J. When the wheel B is lowered, the tension is taken off the band A, and the latter can be readily removed for grinding or other purposes. The saw-band A is placed in position on the band-wheels B and B′ while the band-wheel B is in a lowered position, and then the cam-lever I is swung back to its normal position, (shown in full lines in Fig. 2,) whereby the rod H is drawn upward and

an upward-swinging motion is given to the lever G and an upward-sliding motion to the bearing C and wheel B to tighten the saw-band A. As the cam-lever I rests on the spring J, it is evident that the bearing C and wheel B are spring-supported, and consequently are free to yield under a strain to prevent injury to the band and other parts of the machine.

By using a spring instead of a weight, as heretofore done, it is evident that a more responsive tension device is provided, and at the same time the band-wheel B can be readily lowered without much exertion on the part of the operator or without disturbing the position of the spring J whenever it is desired to remove the saw-band or place it in position on the wheels B and B′.

The guides L for the saw-band, as well as the gage N, are of usual construction, so that further description of the same is not deemed necessary.

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

1. In a band sawing-machine, the combination with the frame, of a bearing for one of the band-wheels slidably mounted therein, a lever fulcrumed on the frame, an adjustable supporting connection between said bearing and said lever, a rod pivotally connected with the lever, a spring encircling said rod and resting on said frame, a washer also encircling said rod and resting on said spring, and a cam-lever fulcrumed on the rod above said washer and engaging therewith.

2. In a band sawing-machine, the combination with the frame, of a bearing for the one of the band saw-wheels slidably mounted in the frame, a bifurcated lever fulcrumed on the frame, a sleeve pivoted in said bifurcated lever, a screw rotatable within said sleeve and having threaded engagement with said bearing, a rod pivotally connected with said lever, a spring encircling said rod and resting upon said frame, a washer also encircling said rod and resting on said spring, and a cam-lever fulcrumed on said rod above said washer and engaging therewith.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES SEYMOUR.

Witnesses:
GEO. W. DEATRICK,
JOS. BAUER.