

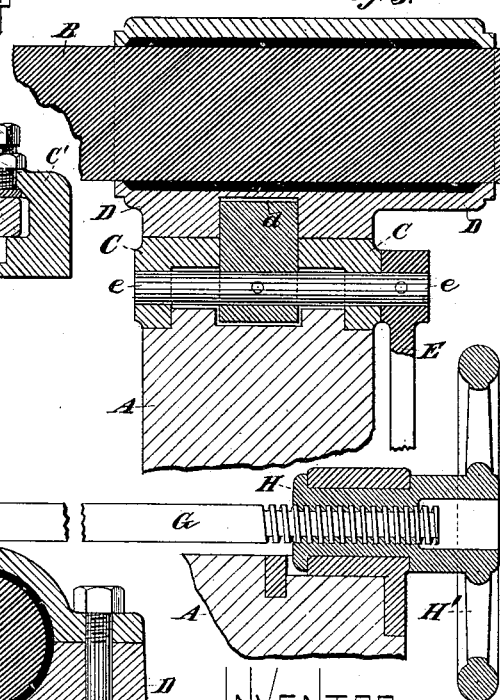
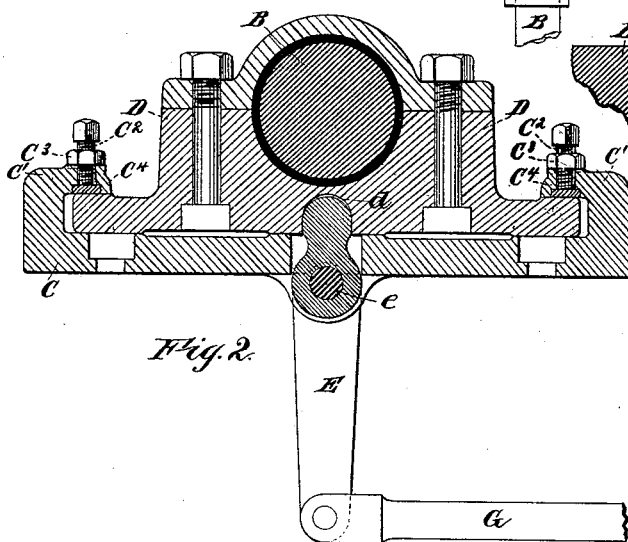
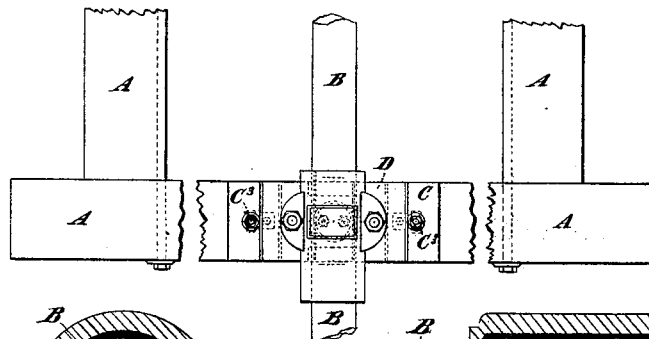
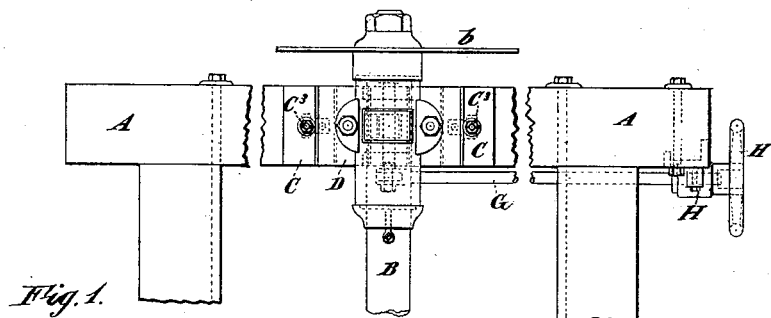
(No Model.)

G. H. ZSCHECH.

BEARING FOR CIRCULAR SAW SHAFTS.

No. 262,551.

Patented Aug. 8, 1882.



WITNESSES  
John R. Seale.  
B. E. D. Grifford.

INVENTOR  
G. H. Zschech  
By his attorney  
T. J. Nelson

# UNITED STATES PATENT OFFICE.

GUSTAVUS H. ZSCHECH, OF INDIANAPOLIS, INDIANA.

## BEARING FOR CIRCULAR-SAW SHAFTS.

SPECIFICATION forming part of Letters Patent No. 262,551, dated August 8, 1882.

Application filed January 13, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, GUSTAVUS H. ZSCHECH, of Indianapolis, Marion county, in the State of Indiana, have invented certain new and useful Improvements in Circular-Saw Mills, of which the following is a specification.

The object of the invention is to conveniently and exactly control the lead of the saw.

The boxes or pillow-blocks are both free to swivel to a sufficient extent, and one is equipped with a lever and connections, by which it may be adjusted forward and backward with great delicacy while the saw is running and at full work.

The following is a description of what I consider the best means of carrying out the invention. The accompanying drawings form a part of this specification.

Figure 1 is a general plan view of the whole. The remaining figures represent portions thereof on a larger scale. Fig. 2 is a section showing the means for adjusting one of the bearings or pillow-blocks forward and backward, and for holding the block very strongly and firmly. Fig. 3 is a section of a portion thereof in a plane at right angles thereto. Fig. 4 is a section of the other pillow-block, which is capable only of swiveling.

Similar letters of reference indicate like parts in all the figures.

A is the fixed frame-work, which may be of any ordinary construction, and need not be minutely represented. It will be understood that the carriage for the log or other article to be treated, the feed, &c., may be of any ordinary or suitable material and construction.

B is the saw-arbor, and *b* the saw, it being understood that the means for fixing the saw on the arbor, the pulley for driving, and the provisions for lubricating, &c., are of any ordinary or suitable character.

C C are castings bolted or otherwise firmly fixed on the framing A, certain parts of which will be designated by additional marks of reference, as C', when required.

D D are adjustable pillow-blocks resting on planed or otherwise smoothly-finished surfaces on the supports C C, and firmly held down thereon by riders resting on planed upper surfaces thereof, as C<sup>4</sup>. These riders are held down by screws C<sup>2</sup>, tapped through the up-

wardly and inwardly projecting parts C' of the bed-castings, as shown in Fig. 2. Jam-nuts C<sup>3</sup> are provided, by which the screws C<sup>2</sup> are held very firmly in position, and the effect of the whole is to hold the respective pillow-blocks very strongly, but with liberty to turn and to move in any direction laterally unless retained by other devices.

The pillow-block D farthest from the saw is equipped with a conical central base-piece or pivot, D', attached to the pillow-block and turning in a corresponding hole in the bed-casting C. The pillow-block thus confined is free to swivel only.

The other pillow-block D—that nearest the saw—is formed with a recess, *d*, in the center of its base, which receives the short arm of a lever, E, mounted on a pivot, *e*, below. The other and longer arm of this lever is knuckled to a rod, G, which extends away to a point conveniently accessible to the attendant, where it is screw-threaded and engaged with a nut, H, turning in fixed bearings and controlled by a hand-wheel, H'.

The pillows are each formed in two parts properly bolted together, and otherwise adapted by oil-holes, babbitting, &c., to serve as bearings for the very rapidly-revolving and severely-strained arbor of a large saw, only a portion of which is shown.

I term as "lead" the inclination of the saw to run out of the log on the one side, or to run into it too much on the other side of its proper course. By turning the hand-wheel H', either while the saw is at rest or in motion, the lead may be changed at will. My invention allows it to be changed within considerable limits while the saw is working with its full force in a large log. It can be changed to vary the lead at particular portions, as in passing a large knot. I believe it practicable by its means to saw in a slight curve sufficient to materially aid in utilizing a large and valuable log which may be slightly curved.

It is important to avoid looseness and shaking at any point. The resistance to the sawing action insures that the short end of the lever E is always pressed strongly backward, and that no lost motion is experienced at that end of the arbor. The other end requires, or may require, a provision for adjustment under

some circumstances. This is effected through the taper of the pivot D' and of the corresponding hole in the bed C. The pivot-piece D' is held to the pillow-block by stout screw-bolts D<sup>2</sup>. A little space being always left between D' and D, the joint may be tightened at any time by screwing up the bolt D<sup>2</sup> D<sup>2</sup>. The motion being rare and to very slight extents, this point once set with just the proper tightness will remain so forever.

Modifications may be made in many of the details. Parts of the invention may be used without the whole. I can realize a good portion of the advantages of the invention by connecting the bolt G directly to the pillow-block without intervention of the lever E; but the lever gives greater force to overcome a considerable friction of the riders or bearing pieces C<sup>4</sup> and the strain of pressing the saw forward into the log, and gives a capacity for nicer adjustment. I can provide for adjusting both the pillow-blocks forward and backward instead of only one. I prefer the whole, as shown and specifically described.

I claim as my invention—

1. As a means for varying the lead of circular saws, the pillow-blocks D, bottom supports, C, top supports, C<sup>4</sup>, and adjusting-lever

E, combined with each other and with the saw-arbor B, as and for the purposes herein specified.

2. The hand-wheel H' and nut H, rod G, lever E, and adjustable pillow-block D, arranged to be moved forward and backward thereby, in combination with the saw-arbor B, and with the swiveling pillow-block serving as a bearing for the other end thereof, all substantially as and for the purposes herein specified.

3. In a circular-sawing machine, a swiveling pillow-block, D, having a conical pivot, D', and attaching and adjusting means D<sup>2</sup>, in combination with a bed-plate or support, C, having a corresponding conical hole, and having also riders C<sup>4</sup>, aiding to hold down the block arranged to serve relatively to the saw-arbor A, and to means for adjusting one or both the pillow-blocks forward and backward, as herein set forth.

In testimony whereof I have hereunto set my hand, at Atlanta, Georgia, this 9th day of January, 1882, in the presence of two subscribing witnesses.

GUSTAVUS H. ZSCHECH.

Witnesses:

ABRAHAM JOHNSON,  
CHARLES A. WEIL.