

(No Model.)

2 Sheets—Sheet 1.

W. McBETH.
BAND SAW GUIDE.

No. 573,028.

Patented Dec. 15, 1896.

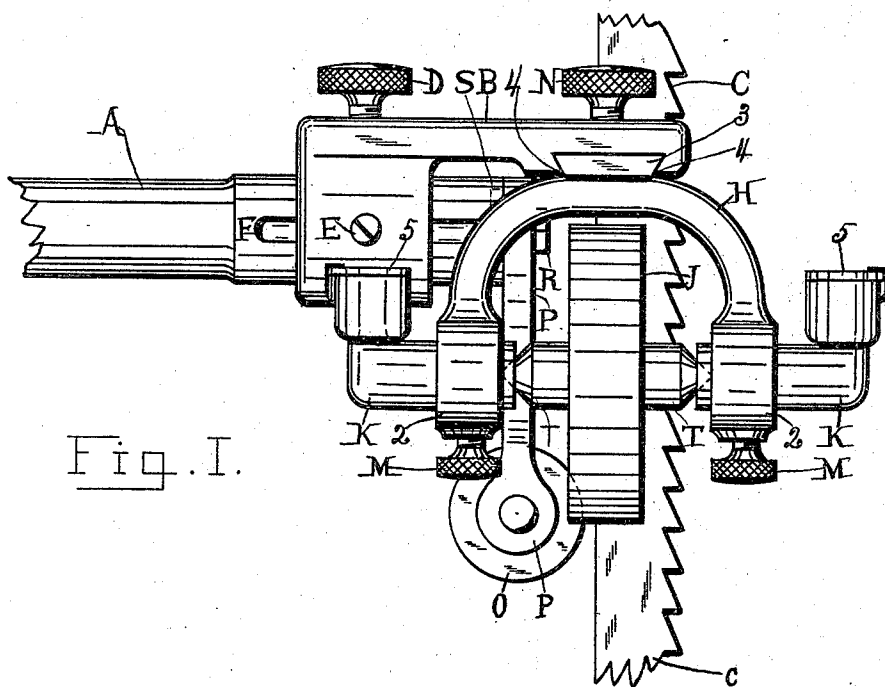


Fig. I.

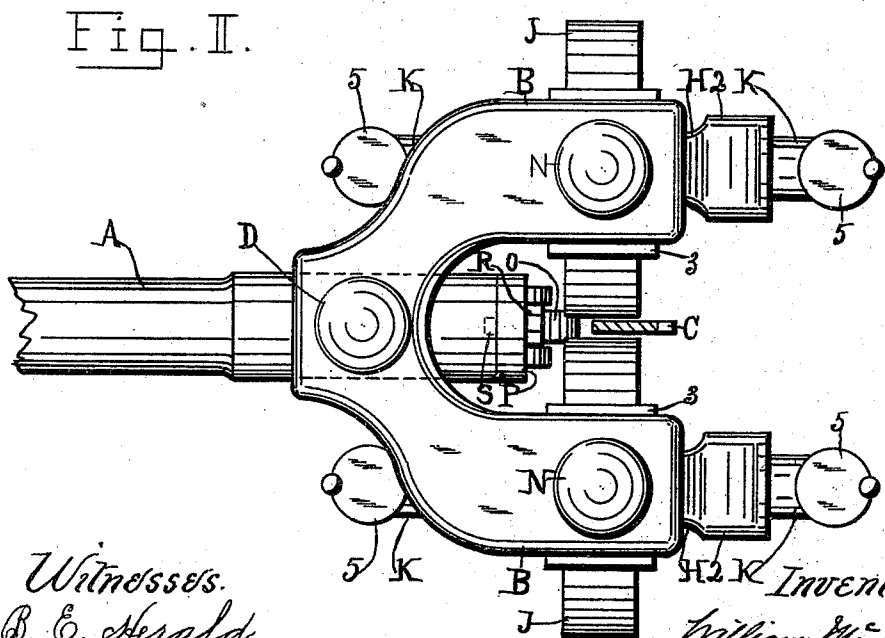


Fig. II.

Witnesses.
B. E. Herald
John P. Kline

Inventor.
William McBeth
By John H. Leach, Jr. Atty.

(No Model.)

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Fig. III.

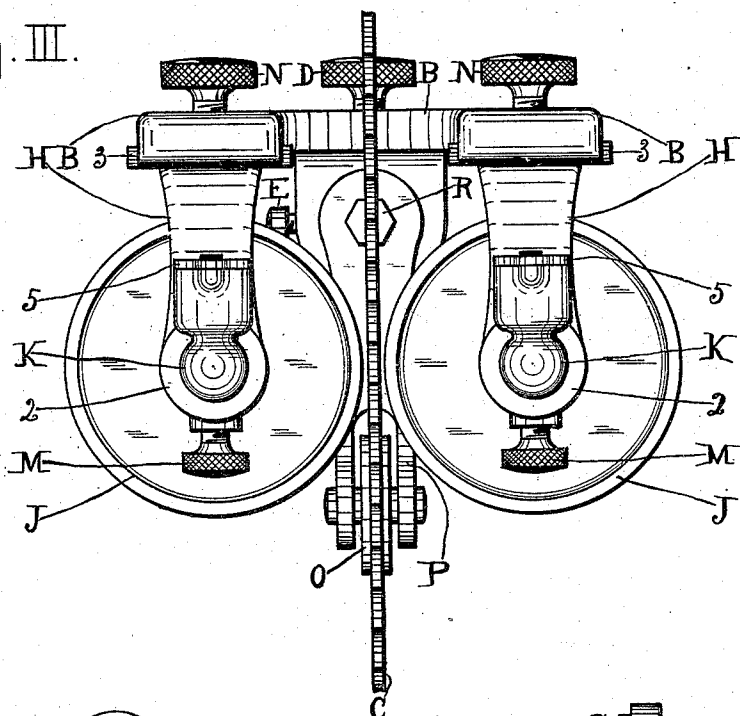


Fig. IV.

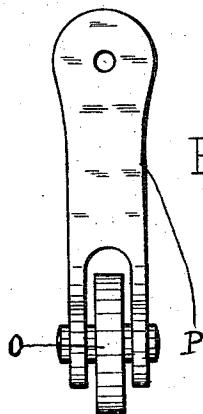
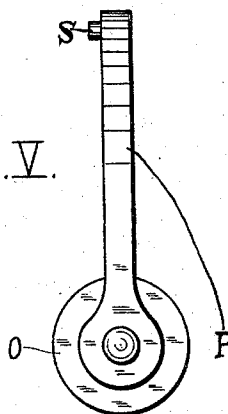


Fig. V.



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UNITED STATES PATENT OFFICE.

WILLIAM MCBETH, OF HAMILTON, CANADA.

BAND-SAW GUIDE.

SPECIFICATION forming part of Letters Patent No. 573,028, dated December 15, 1896.

Application filed April 10, 1896. Serial No. 586,969. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MCBETH, a citizen of Canada, residing at Hamilton, in the county of Wentworth and Province of Ontario, Canada, have invented a new and useful Band-Saw Guide, of which the following is a specification.

My invention relates to improvements in band-saw guides in which two independent adjustable and revolving side wheels and also a small adjustable rear wheel operate in conjunction with the vertical part of the band-saw above the table of the machine; and the objects of my improvements are, first, to provide revolving side guides to retain the band-saw in vertical position, thus preventing torsion and yet allowing perfect freedom to the running of the saw; second, to provide a rear revolving pressure-support for the saw immediately in rear of the said side guides; third, to afford facilities for the proper adjustment of these guides independently of each other in respect of the band-saw, and, fourth, to reduce the friction of the two operating side guides and the operating rear pressure-support to a minimum and to prevent crystallizing or abrasion. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the device with its horizontal arm (broken) which connects the device to the band-saw in position, (also broken.) Fig. 2 is a plan, and Fig. 3 is a front elevation, of the same. Fig. 4 is a front detail elevation of the detached rear pressure-support, and Fig. 5 is a side elevation of the same.

Similar letters and figures refer to similar parts throughout the several views.

The broken end of the horizontal arm A fits in a socket above and in rear of the table of all band-saw machines and is capable of inner and outer as well as vertical adjustment, in order to suit various distances as well as different thicknesses of wood to be sawed. This said arm supports the framework B, which is capable of horizontal adjustment and held in position to suit the band-saw C by means of the set-screw D, and to prevent said framework from turning a pin E is applied, which fits into the horizontal slot F of said arm,

this pin forming a part of the interior of the hub of said framework. This framework has a vertical opening, centrally located, to allow the band-saw free course and also to allow for the complete separation and independency of the two curved side arms H, which support the guide-wheels J by means of the adjustable bearings K, which pass through the hubs 2 of said side arms H and held in adjusted position to suit the saw by means of set-screws M. The upper part of these side arms H are constructed to form beveled slides 3, which fit between the beveled lips 4 on the under part of the upper divided frame B, therefore enabling the said arms to slide and be adjusted with their wheels J to position, that is, the inner face of the wheels slightly engaging with the flat sides of the saw and held by means of the set-screws N. The back of the band-saw also engages with the face of the smaller wheel O in fork P, which is suspended from and secured to the inner end of the arm A by means of central screw R and pin S. Said pin will prevent any possibility of the said suspended fork from turning from position, this being very important.

It will be perceptible that the important elements in the construction of this saw-guide are the adjustability of the side wheels to suit different thicknesses of saws; also, the rear wheel O may be adjusted to position to suit different breadths of saws and held by set-screw D. These guide-wheels have conical bearings T, which, with their wheels J, revolve in the inner sockets of the rigid bearings K, which are supplied with outer end and upper oil-cups provided with pivoted covers 5. The oil flows from said oil-cups to the conical points of bearings T through an opening through each of the four adjustable bearings K.

It will be observed that by the fact of the band-saw revolving these wheels there will be no crystallizing or abrasion of the sides of the saw, which is very important, the former preventing the thickening of parts of the sides of the saw by a hard gummy matter, which is very disadvantageous, and the latter preventing the saw from wearing out and especially from breaking. Therefore this sys-

tem of guiding and rear supporting of the saw is perfect and essential to good work and the duration of the saw.

The smaller rear wheel, which is also revolved by the saw, is especially applicable when great pressure is brought to bear upon the saw when forcing heavy wood through the same. Thus the saw is retained in its proper vertical position, this being necessary to prevent imperfect work and breakages.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a band-saw guide, the combination of the adjustable side wheels, supported by the curved arms H, having upper beveled slides 3, to fit and slide in the jaws of framework B, for adjustment, and secured by set-

screws N, and capable of horizontal adjustment on arm A, having slot F, the pin E, and the set-screw D, substantially as described and set forth.

2. In a band-saw guide the adjustable side wheels, supported by the curved arms H, having upper slides, for side adjustment in frame B, with set-screws N, and capable of horizontal adjustment on arm A, having slot F, and pin E, and set-screw D, in combination with the rear wheel O, in fork connection secured to said arm A, by screw R, and pin S, substantially as described and set forth.

WILLIAM MCBETH.

Witnesses:

JOHN H. HENDRY,
JOHN JOHNSTONE.