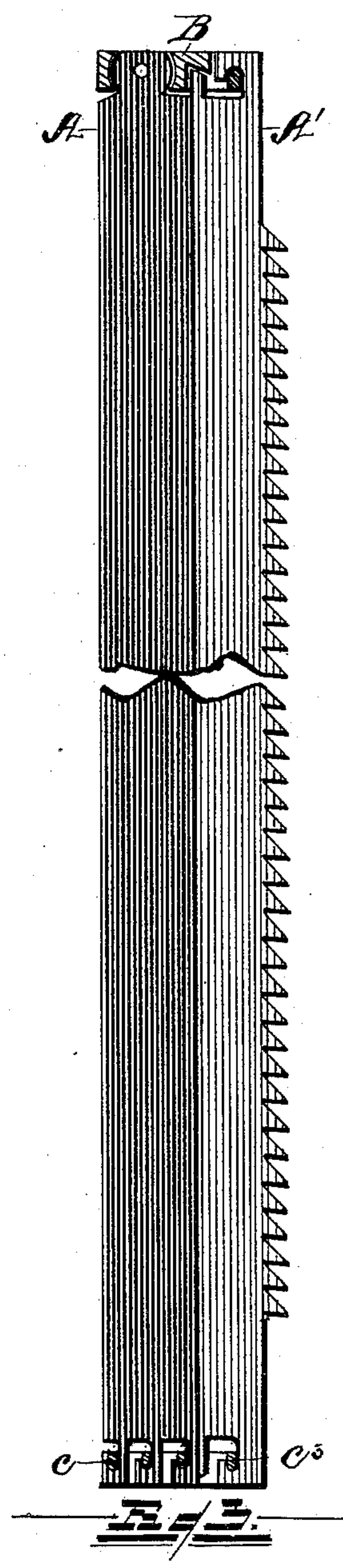
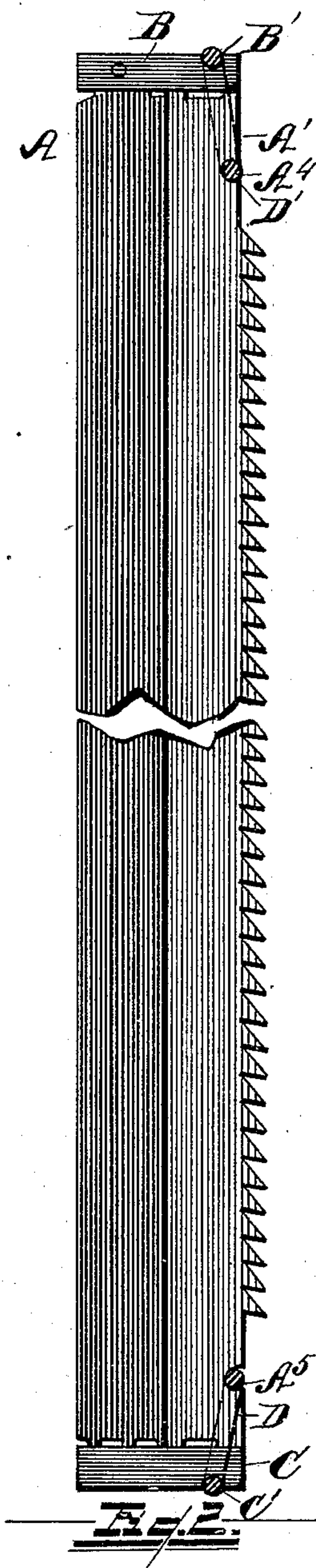
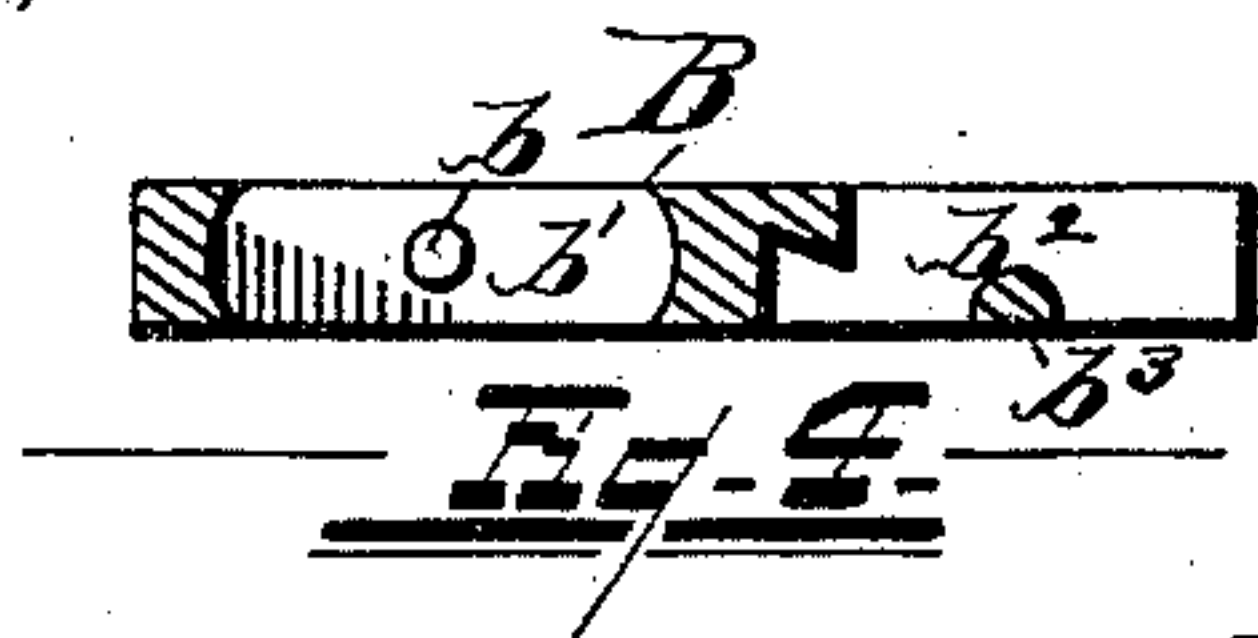
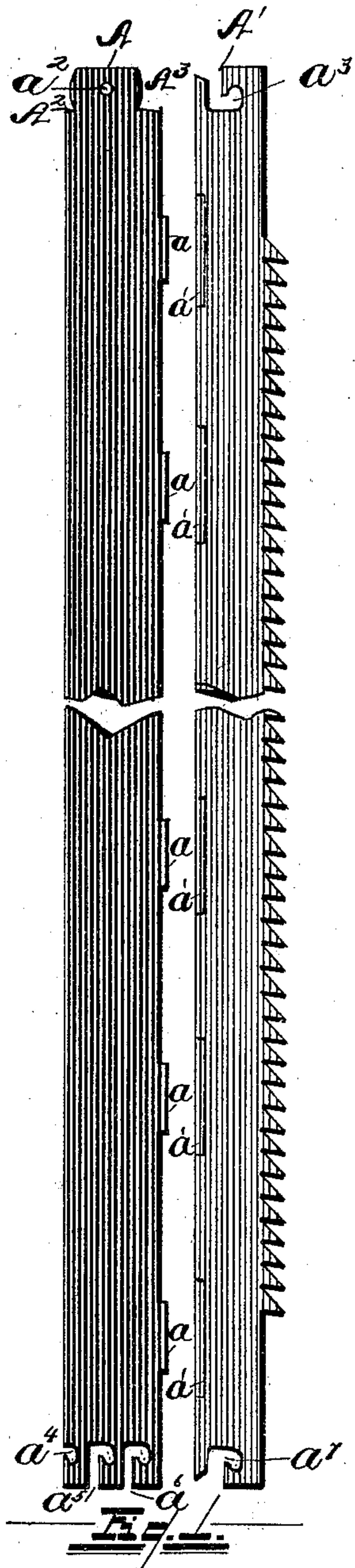


(No Model.)

L. R. BEURMANN.  
SAW TAB.

No. 311,170.

Patented Jan. 27, 1885.



WITNESSES

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# UNITED STATES PATENT OFFICE.

LAWRISTON R. BEURMANN, OF EAST SAGINAW, MICHIGAN.

## SAW-TAB.

SPECIFICATION forming part of Letters Patent No. 311,170, dated January 27, 1885.

Application filed July 5, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, LAWRISTON R. BEURMANN, of East Saginaw, county of Saginaw, State of Michigan, have invented a new and useful Improvement in Saws and Tabs; and I 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 pertains to make and use it, reference being had to the accompanying drawings, which form a part of this specification.

My invention consists in the combination of devices and appliances, hereinafter specified, and more particularly pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a saw-blade embodying features of my invention. Fig. 2 is a similar view showing the tabs engaged therewith. Fig. 3 is a similar view showing the tabs in section. Fig. 4 is a separate view of the upper tab in section. Fig. 5 is a view of the lower tab in section. Fig. 6 is a cross-section of the blade, showing the tenons of the one portion engaged with the shoulders of the other.

My invention relates to saws and tabs, and is more particularly designed to facilitate the removal of the saw from the hangers in gang-saw mills when the saw becomes dull, and also to facilitate its replacement with a sharpened saw. This I accomplish in the manner and by the means hereinafter described and claimed, reference being made to the drawings, where A is the rear portion of the saw-blade, and A' is the front or cutting portion of the blade. I prefer to provide one of the sections with a series of V-shaped shoulders, a, and the other portion with a series of corresponding sockets, a', to facilitate a firm union of the sections, and to prevent the lateral motion of two portions of the blade independent of each other. I would have it understood, however, that I do not limit myself to the construction of the portions of the blade with said shoulders and sockets. I prefer, also, to construct the upper end of the rear section of the blade with an orifice, a<sup>2</sup>, the upper end of the front section with a recess, a<sup>3</sup>. The lower ends of both sections of the blade I also provide with recesses a<sup>4</sup>, a<sup>5</sup>, a<sup>6</sup>, and a<sup>7</sup>. These recesses are constructed so as to communicate with the ends of the blade, so that

the shoulders of the tabs may be entered into said recesses. Said recesses are also extended to one side of the open end of the same, so as to permit the blade being locked in the tab by sliding the blade, so that the shoulders of the tab will engage in the side extensions of said recesses.

I do not limit myself to the precise form of the recesses shown in the drawings, as I contemplate any suitable angular recesses whereby the shoulders of the tab may be entered readily into their open ends, and the saws then moved forward or backward, so as to engage the shoulders of the tab in the angular extension of said recesses, to hold the blade from displacement. The removal of the cutting portion of the blade will also be facilitated by cutting off the inner corners adjacent to the recesses, as shown in Figs. 1 and 3.

B and C are my improved tabs.

Hitherto tabs as commonly constructed have been made in separable parts, the one part adapted for engagement with the blade, the other part being then riveted or held in place by screws. I prefer, however, to construct my improved tabs in one integral piece, dispensing thus with the necessity of securing one of the faces in place after the saw is engaged with the tab.

As illustrated in the drawings, the tab B is adapted for engagement with the upper portion of the plate and the tab C with the lower portion of the plate. The tab B is constructed with an orifice, b, and socket b', adapted to receive the corresponding upper end of the rear section of the blade, said upper section of the rear portion of the blade recessed or cut away, as shown at A<sup>2</sup> and A<sup>3</sup>. Said tab is also recessed, as shown at b<sup>2</sup>, for the reception of the upper end of the front portion of the blade, and provided with a shoulder, b<sup>3</sup>. The tab C is provided with a series of shoulders, c c' c<sup>2</sup> c<sup>3</sup>, adapted to enter the recesses in the lower ends of the blade, the recess a<sup>4</sup> communicating with the rear edge of the blade, and the other recesses communicating with the lower edge or end of the blade.

The operation of the device is as follows: The rear portion of the blade is engaged in place in the tabs by entering the shoulders of the tabs into the recesses of the blade, and then forcing the blade in the direction to en-



gage said shoulders under the angular extensions. The upper end of the rear section is pivotally engaged with the upper tab by inserting a rivet or screw through the orifices  $a^2$  of the blade and  $b'$  of the tab. The front portion of the blade is also engaged with the tabs by entering the shoulders  $b^3$  and  $c^3$  into the corresponding recesses of the blade through the open ends of said recesses, when the blade may be forced back against the rear portion of the blade so that the shoulders of the tab will come under the angular extension of the recesses, as shown in Fig. 3. By pivotally connecting the upper end of the rear portion of the blade with the tab the operation of engaging the front portion of the blade may be facilitated, as this pivotal connection permits the forward end of the upper tab to be tilted for this purpose, this pivotal connection also equalizing the tension when applied to the two sections of the blade. This pivotal connection I regard as a matter of great convenience and importance where the blade is constructed in two sections, and forms an essential feature of my invention. I would have it understood, moreover, that I do not limit myself to the use of my improved tabs with blades constructed in two sections, as they may be employed with an integral blade. It is obvious, however, that by constructing the blade as shown in the drawings, with a removable cutting-edge, the labor of removing and replacing the saw when dull is lessened, as the cutting-edge alone needs to be removed and replaced for sharpening; or, should it be entirely outworn, it alone may be replaced with a new cutting-edge, the remainder of the blade remaining. Thus the rear portion, constituting the heavier part of the blade, will outlast several cutting-edges, thus securing great economy in the construction of the saw-blades.

Instead of engaging the front portion of the blade with the tabs in the manner shown, the tab may be constructed with a groove,  $B'$  and  $C'$ , and the front section of the blade with recesses  $A^4$  and  $A^5$ , said recesses and grooves adapted to receive a link,  $D$  and  $D'$ .

It is obvious that when the tabs are engaged with the blades, and tension is applied to said tabs, as is the case in gang-saws, the location of the shoulders of the tabs in the angular ends of the recesses of the blade will effectually prevent any possibility of the disengagement of the blade with the tabs, especially as I prefer to curve the angular ends of said recesses, as shown, to receive the shoulders of the tabs.

The links  $D$  and  $D'$  may be employed in connection with the other means shown and described for engaging the front portion of the blade with the tabs, thus holding the front portion of the blade more firmly in engagement with the tabs.

I would have it understood that I design to engage the front portions of the blade with the tabs, either with or without the links and the other means herein specified, either separately or conjointly, or they may be entirely dispensed

with. If the links are used, they are adjusted in place over the corresponding notches in the tabs and blades before the tension is applied. 70

I do not limit myself to any definite number of shoulders in the tabs or corresponding recesses on the extremities of the blade, nor to the specific form of said shoulders and recesses. 75

I do not limit myself to the use of the lower tab in that location, as it is evident that with an integral blade the same may be used at both ends of the blade.

I am aware that tabs made in an integral piece have been constructed, but without interior shoulders and sockets to engage with corresponding sockets and tenons upon the ends of the saw-blade, the same having to be riveted upon the saw-blade, in which case the blade is not removable. In my improved tab, however, no rivets are needed for the purpose of securing the same upon the blade, except in case of the upper tab, to permit of its being tilted, if desired, the shoulders in the tabs serving to hold the blade in connection therewith, and to prevent the sides of the tab from spreading when tension is applied. I prefer, also, to construct the sockets  $a'$  upon the front portion of the blade longer than the tenons  $a$ , as it is necessary that the cutting-blade must work freely upon the back blade in connecting the two together and in disconnecting them. This construction will prevent their binding at these points. 100

I claim—

1. The combination, with a saw-blade having open-ended recesses at its extremities, of a slotted saw-tab composed of a single piece, having interior transverse shoulders for engaging and disengaging the recesses of the saw-blade, substantially as described. 105

2. The combination, with a saw-blade composed of two parts each having its extremities provided with open-ended recesses, of a saw-tab having interior transverse shoulders for detachably engaging the end recesses of the saw-blade, substantially as described. 110

3. The combination, with a saw-blade composed of two parts, of a saw-tab pivotally connected with one of said parts and detachably engaged with the other part, substantially as described. 115

4. The combination, with a saw-blade composed of two parts, one having an open-ended recess at its extremity, of a saw-tab pivotally connected with the extremity of the other part of the saw-blade, and having a shoulder to detachably engage the open-ended recess, substantially as described. 120

5. The combination, with a saw-blade having two parts, one having an open-ended recess at its extremity, of the saw-tab formed in a single piece, and having the recesses  $b b^2$ , shoulder  $b^3$ , and pivot connecting the tab with one part of the blade, so that its shoulder may be detachably engaged with the open-ended slot of the other part of the blade, substantially as described. 125



6. The combination of a saw-blade composed of two parts removably connected at their adjacent edges, with end tabs detachably connecting the extremities of the two parts  
5 of the blade, substantially as described.

7. A saw-blade composed of two parts the adjacent edges of which are provided, respectively, with V-shaped shoulders and tenons, with end tabs detachably connecting the ex-  
10 tremities of the two parts of the blade, substantially as described.

8. The combination, with a saw-blade constructed of a rear section and a front cutting-section, of tabs engaging the extremities  
15 of said sections, one of said tabs having a pivotal connection with the rear portion of the blade, and the front section of the blade

being removably engaged with said tabs, substantially as described.

9. The combination, with the saw-blade constructed in a rear section and a front cutting-section, of tabs engaging the ends of said blades, one of said tabs having a pivoted connection with the rear portion of the blade, and in addition thereto links D and D', to en-  
20 gage the cutting-edge of the blade with the tab, substantially as described. 25

In testimony whereof I sign this specification in the presence of two witnesses.

LAWRISTON R. BEURMANN.

Witnesses:

ADOLPH W. DELES,  
WILLIAM E. GARDINER.