

No. 836,988.

PATENTED NOV. 27, 1906.

J. OLDHAM.

SAW.

APPLICATION FILED SEPT. 20, 1905.

Fig. 1.

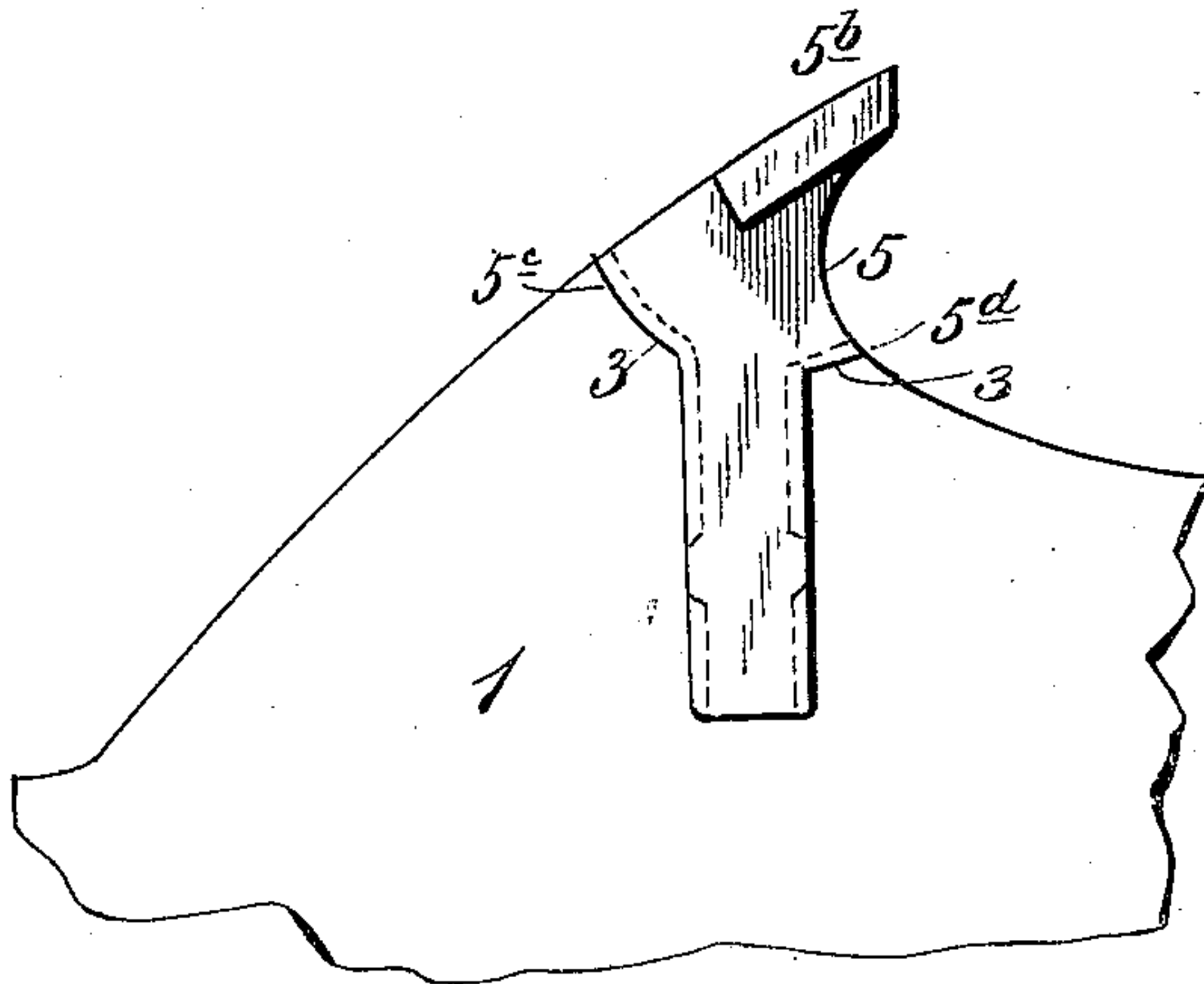


Fig. 2.

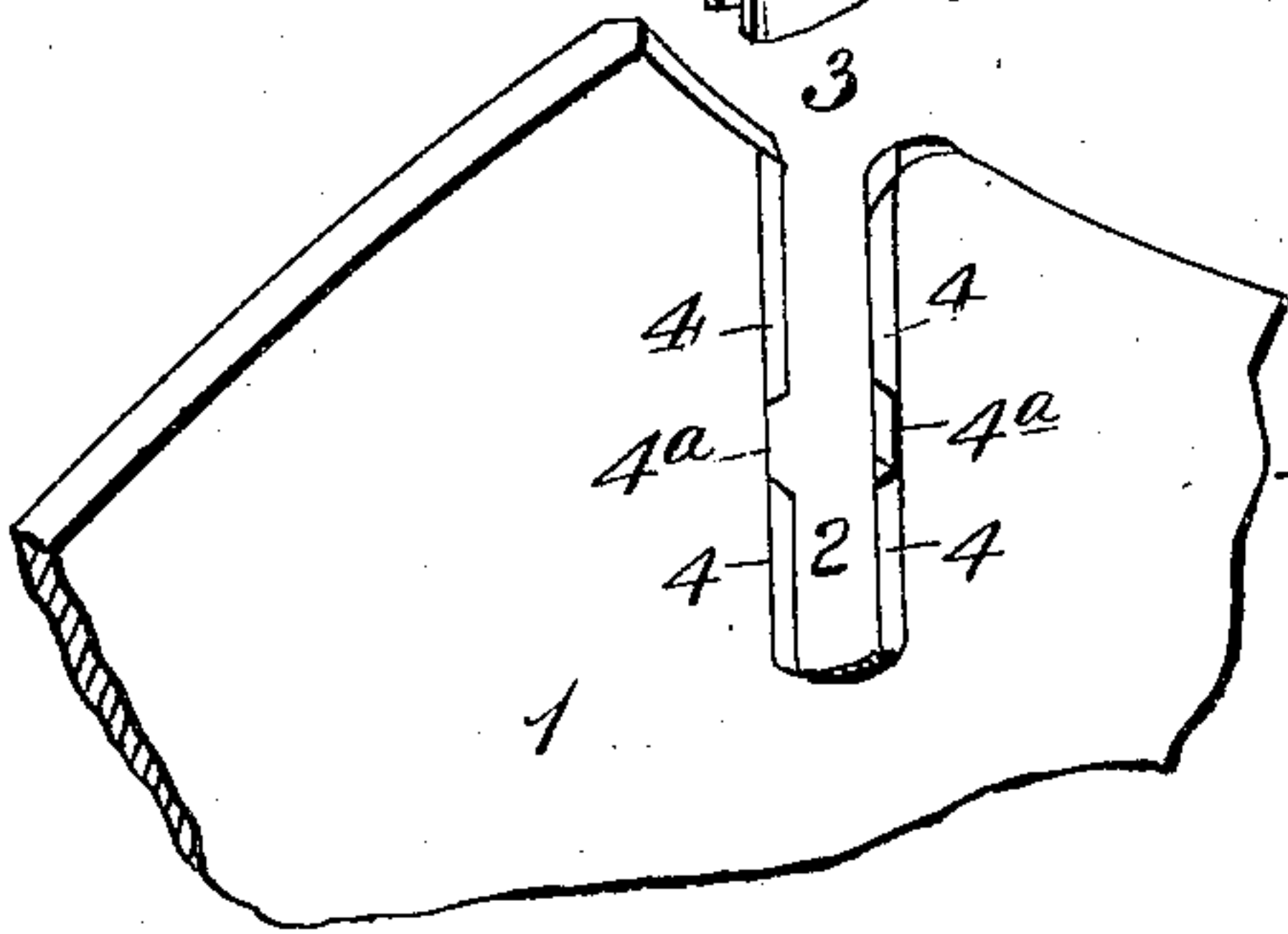
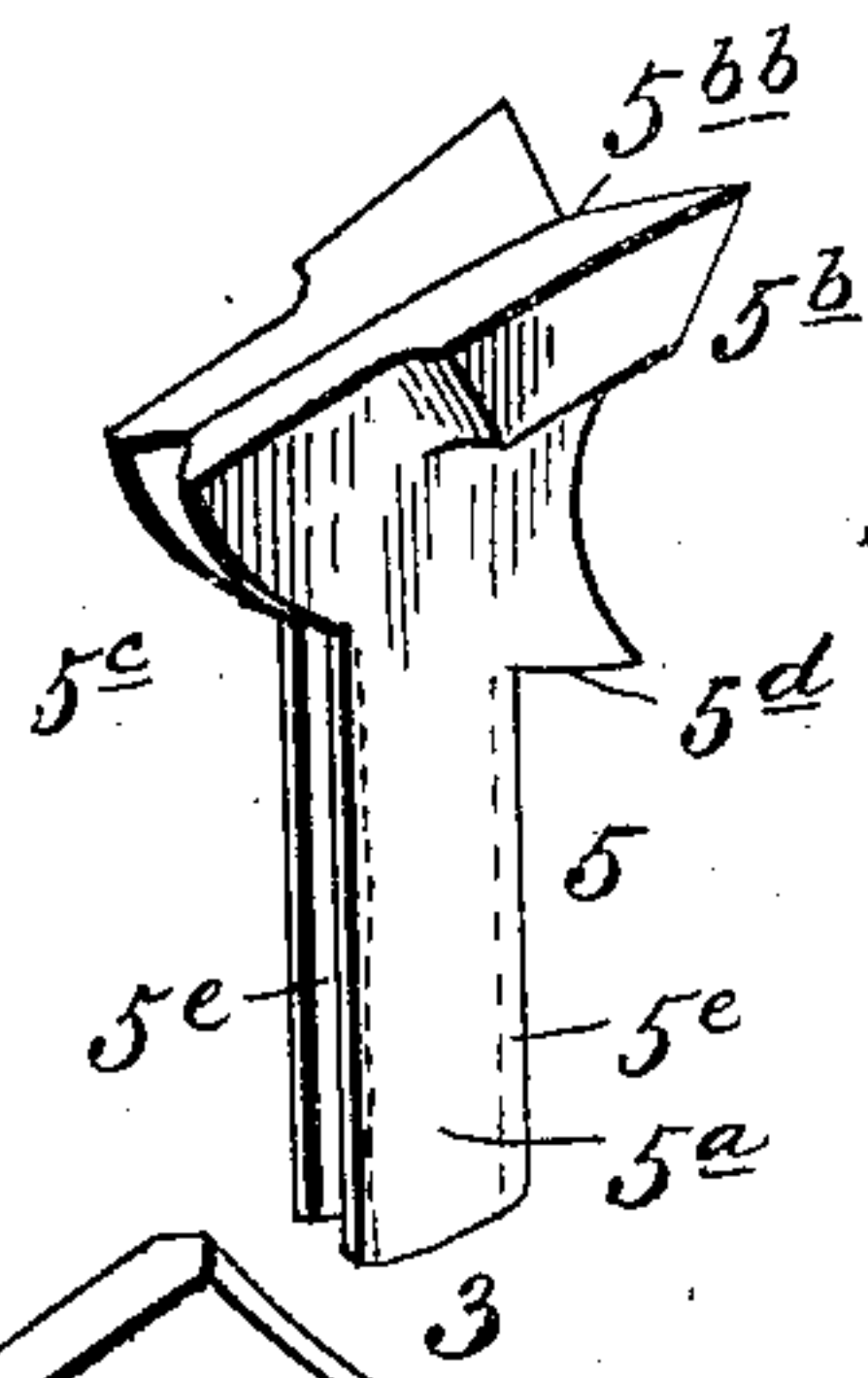


Fig. 3.

Fig. 4.

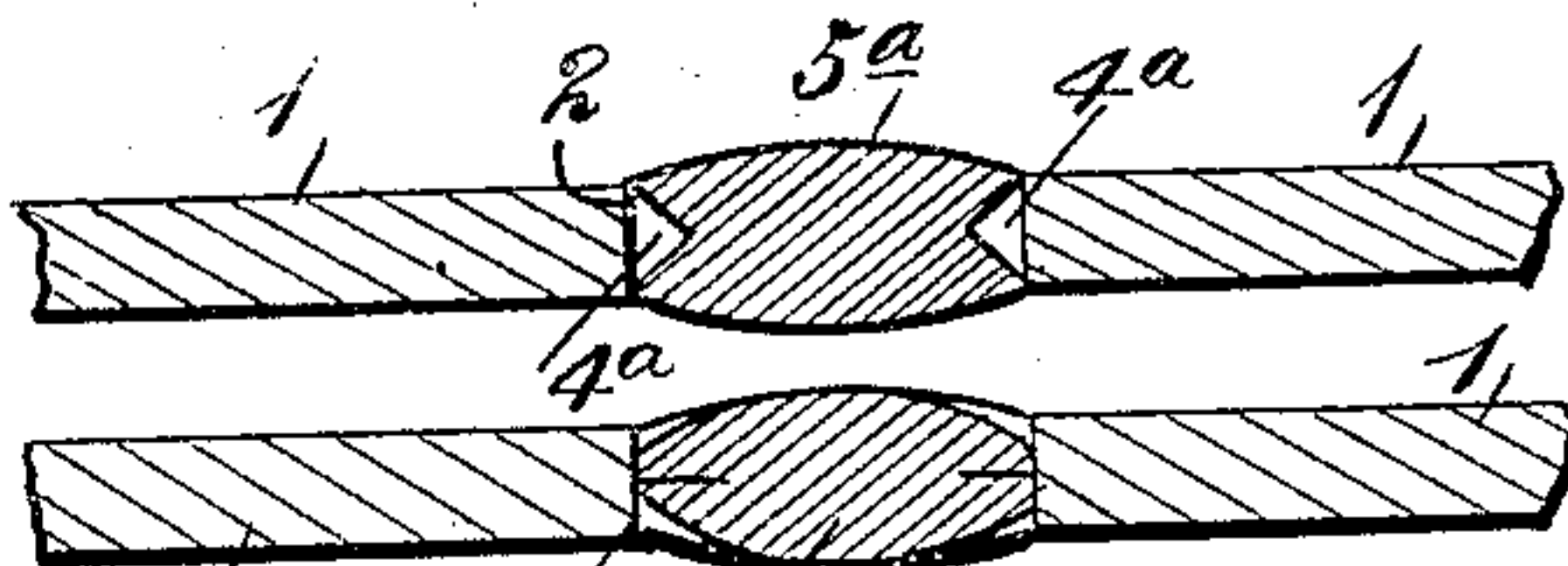


Fig. 4a.

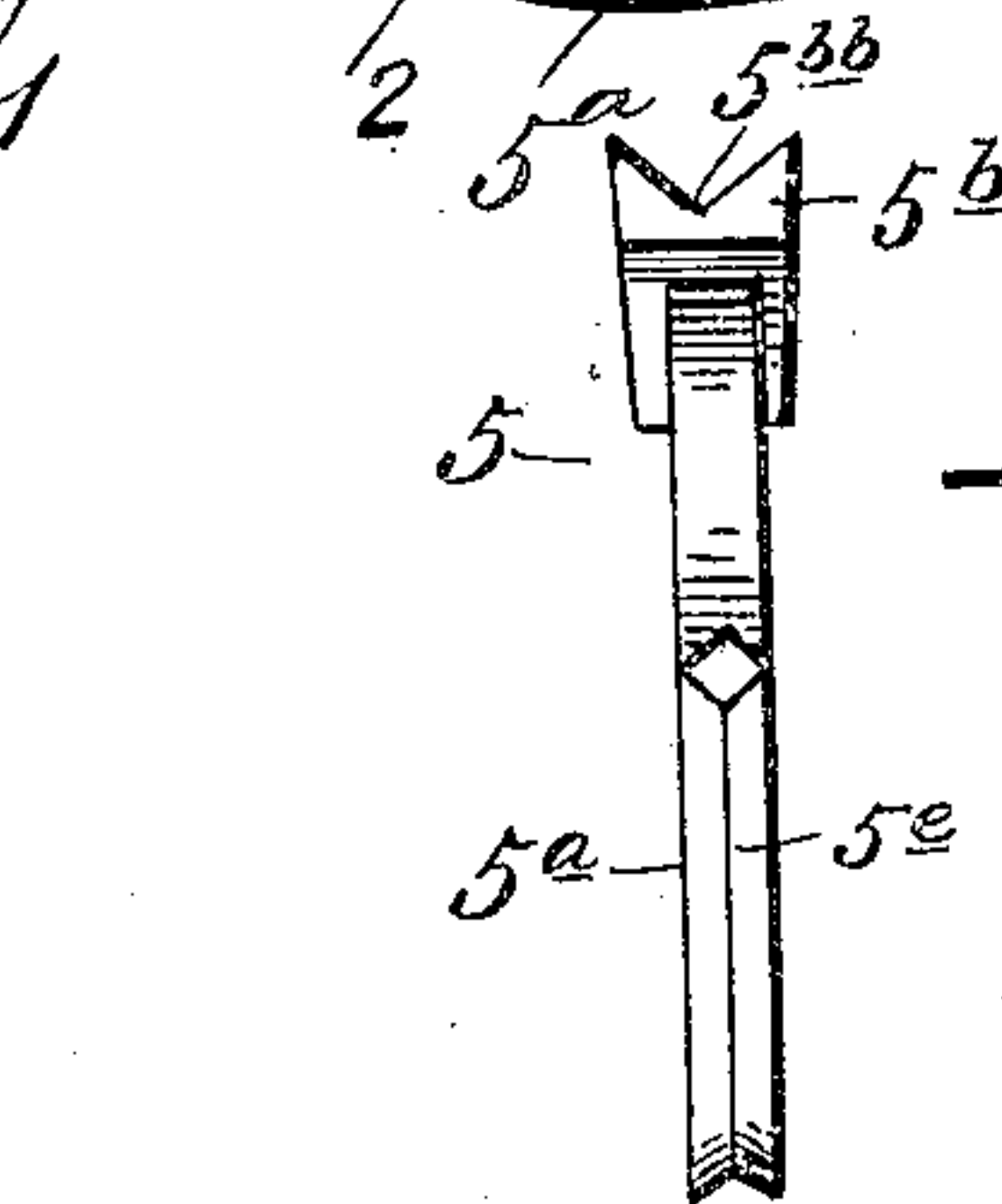
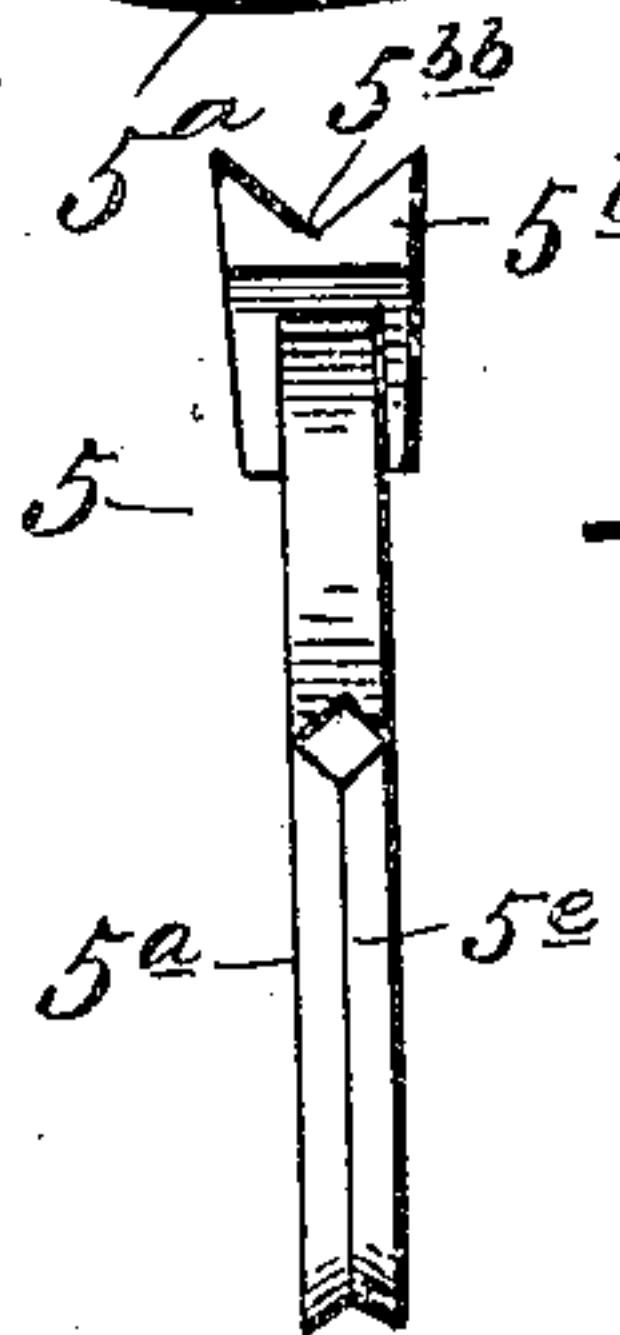


Fig. 5.



Witnesses  
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By

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# UNITED STATES PATENT OFFICE.

JOSHUA OLDHAM, OF NEW YORK, N. Y.

## SAW.

No. 836,988.

Specification of Letters Patent.

Patented Nov. 27, 1906.

Application filed September 20, 1905. Serial No. 279,352.

*To all whom it may concern:*

Be it known that I, JOSHUA OLDHAM, a citizen of the United States, residing in the borough of Brooklyn, in the city of New York and State of New York, have invented new and useful Improvements in Saws, of which the following is a specification.

My invention relates to certain new and useful improvements in insertible teeth for saws—band, circular, gang, or cross-cut.

It has for its objects, among other things, to prolong the usefulness of the tooth, as in providing against the premature reduction thereof from successive filing or sharpening operations; to dispense with the use of additional or separate means for securing the teeth in place in the blade—as, for instance, the use of the primitive rivet, the curved separate shank or throat-piece, and the like; to economize space in the arrangement of the teeth in the blade; to avoid the crowding of the teeth, consequently preventing interference with their cutting action by the accumulation of sawdust in the throat of the teeth; to increase the efficiency of the individual teeth, and accordingly the cutting capacity of the saw, more especially of large circular saws used in the manufacture of lumber; to secure a greater amount of throat room or space between the teeth than has heretofore been obtainable by insertible teeth now commonly in use, which cannot be held in place without the use of movable shanks or like fastenings; to obviate the swaging or setting of the teeth, and to effect all of the aforesaid objects in a simple, economic, and effective manner.

Said invention therefore consists of certain structural features as pertain to both the tooth and the means of fastening therefor, substantially as hereinafter more fully disclosed, and particularly pointed out by the claims.

In the accompanying drawings, illustrating the preferred embodiment of my invention, Figure 1 is a fragmentary view of a certain type of saw equipped with teeth produced in accordance with said invention. Fig. 2 is a detached perspective view of one such tooth. Fig. 3 is a broken fractional view of the blade or body portion of the saw, showing more especially opposite interruptions or notches in the walls of one of the tooth-receiving slots, the walls of the slots of all of the teeth of course being made in like manner. Fig. 4 is a transverse section through

the tooth and the notched portions of the tooth-sockets, showing the tooth before the edges are pinched together. Fig. 4<sup>a</sup> is a transverse section taken directly through a tooth and the notches or interrupted portions of the convergent or tapered portions of the walls of the slot receiving said tooth, disclosing particularly portions of the vertical edges of the tooth “pinched” or upset thereinto. Fig. 5 is a front elevation of a tooth, showing more especially the cross-sectional outline of the groove, gutter, or bifurcation in the top edge of the tooth.

In carrying out my invention, I provide a blade 1 with tooth-receiving sockets or slots 2, terminating at their outer or open ends in seats or depressions 3, forming forward and rearward extensions or elongations of said slots or sockets, these latter presently again noted. Said slots or sockets have their forward and rear walls formed with tapered or convergent ribs or fins 4, extending practically along their entire walls for a purpose later made apparent. These fins or ribs have opposite portions of their surfaces removed or displaced at suitable points, thus forming notches or recesses 4<sup>a</sup> therein, the object of which will also hereinafter appear. Said blade is also equipped at the usual intervals throughout its periphery or perimeter with insertible teeth 5 for ready removal and renewal, as may be required. Said teeth are of practically the general outline shown, each having a right-lined shank 5<sup>a</sup> and an effective or cutting portion or tooth proper 5<sup>b</sup>, arranged or standing at an obtuse angle to said members and having a heel extension or shoulder 5<sup>c</sup> in continuation thereof. Also in continuation of the point proper as well as of the shank member is a forwardly-extending part or shoulder 5<sup>d</sup>, the inner edge of which, together with the corresponding edge of the shoulder 5<sup>c</sup>, having a common curvature, and both which and the forward and rear edges of said shank are channeled or recessed, as at 5<sup>e</sup>, the recesses thus provided being preferably in V form. The curved edges of the shoulders 5<sup>c</sup> 5<sup>d</sup> rest or fit in the seats or depressions 3 in the upper edge of the saw-blade, while the recesses 5<sup>e</sup> receive the convergent or tapered ribs or fins 4 along the shanks of the teeth and the corresponding edges of the bottoms of said seats, thus providing for holding the teeth against lateral displacement. It is obvious that this arrangement of recesses and



ribs or fins may be reversed or transposed, the former being produced in the walls of the tooth-receiving slots and the latter formed upon the shanks of the teeth and yet fall within the range or spirit of my invention.

The tooth proper, 5<sup>b</sup>, which has also practically the form of a bit and is somewhat laterally flared toward its effective or cutting edge or point as well as inclined inward at the latter edge, is provided with a bifurcation, groove, or channel 5<sup>bb</sup> of V form in transverse section with the walls of the groove of channel flared outward or radially and the latter accordingly opening out through the top side or surface of said bit or tooth proper, the purpose of which will be seen presently. Said channel or groove is tapered rearward or toward the heel end of the bit or tooth and has its greatest flare both as to its transverse and longitudinal sections at the forward or effective edge or point of the tooth. Therefore it will be noted that the tooth is formed with deep cutting edges at the point and which extend back in the direction of its axis, whereby it is obvious that, it thus being adapted to be sharpened or filed from the forward end or point upon its inward inclined surface, it may be subjected to the maximum number of filing or sharpening operations before being so reduced as to be rendered useless, as is apparent, and whereby the usefulness of the tooth or bit will be greatly prolonged, outlasting, as has been practically verified, the use of bits or teeth of similar type three to one. It will also be noted that with the use of a suitable tool the flared thin edges of the tooth formed by grooving or channeling the same, said edges may be pinched or upset into the recesses or notches of the walls of the tooth-receiving slot and the tooth thus secured in place

against endwise or radial displacement. It is further observed that by this particular manipulation of the tooth any derangement of the tension of the saw-blade is obviated, as would otherwise be liable to occur, as by the hammering of the tooth by an unskilled workman in securing it in place.

I claim—

1. A saw having an insertible tooth flared laterally toward its effective or cutting edge and inclined inward and rearward at said edge, thereby forming the point, said tooth also having its top edge bifurcated in the direction of the length of said edge, with the walls of the bifurcation flared outward and laterally and vanishing at their points of intersection with the outer lateral edges of the tooth, and said top edge also being sloped rearward to its point of conjunction with the blade of the saw.

2. A saw having an insertible tooth flared laterally toward its effective or cutting edge and inclined inward and rearward, thereby forming the point, said tooth also having its top edge bifurcated, with the walls of the bifurcation flared outward laterally and vanishing at their points of intersection with the outer lateral edges of the tooth and said top edge also being sloped rearward to its point of conjunction with the blade of the saw, the shank of said tooth having lateral edges pinched or upset into notches formed in the opposite edge of the shank-receiving slot in said blade.

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

JOSHUA OLDHAM.

Witnesses:

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