

(No Model.)

J. HILTON.

SAW HANDLE.

No. 323,508.

Patented Aug. 4, 1885.

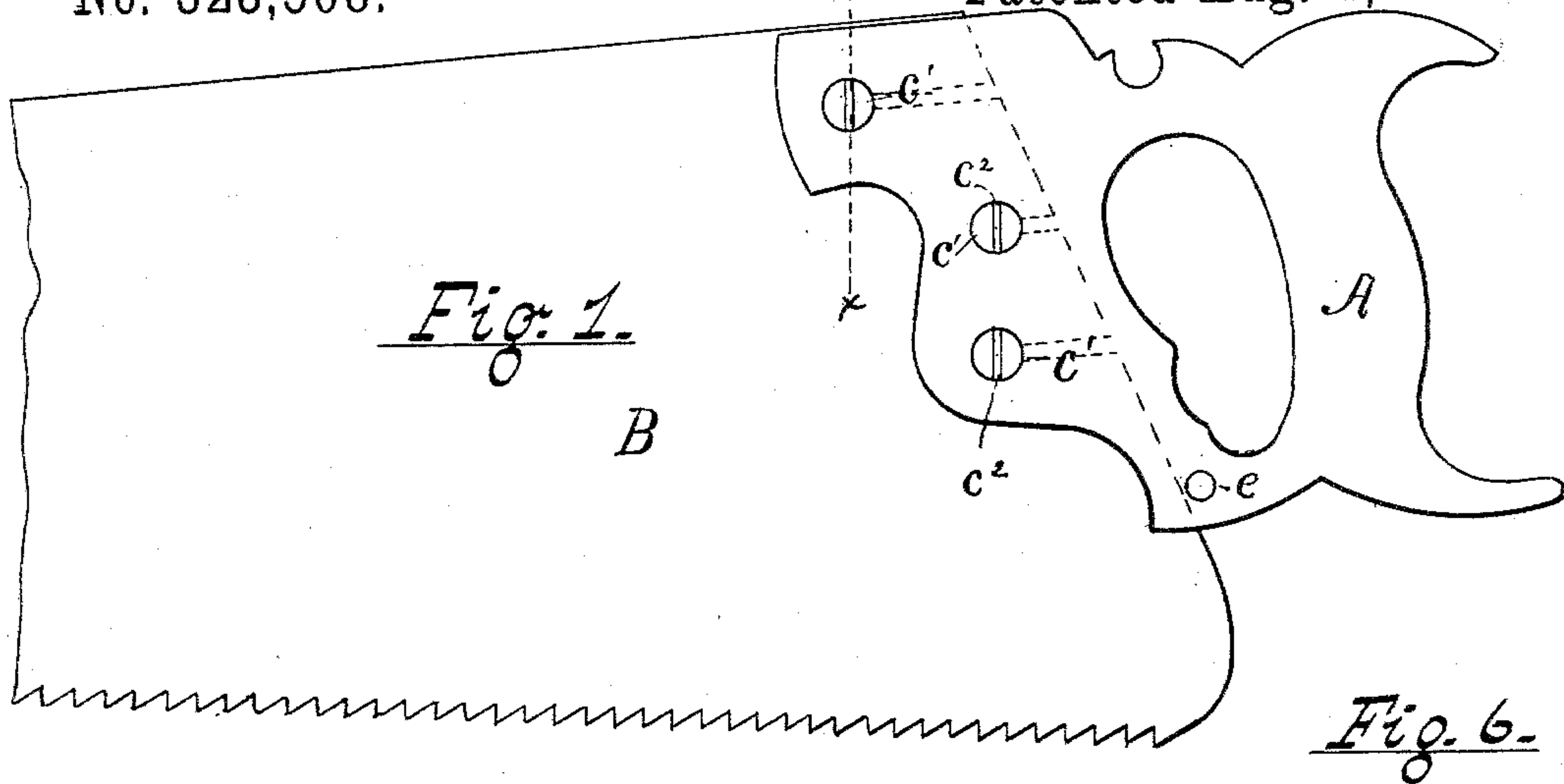


Fig. 7.

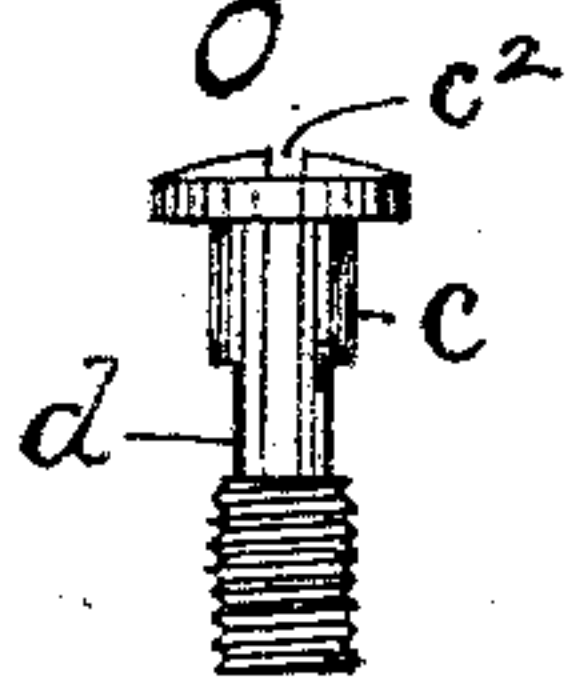


Fig. 4.

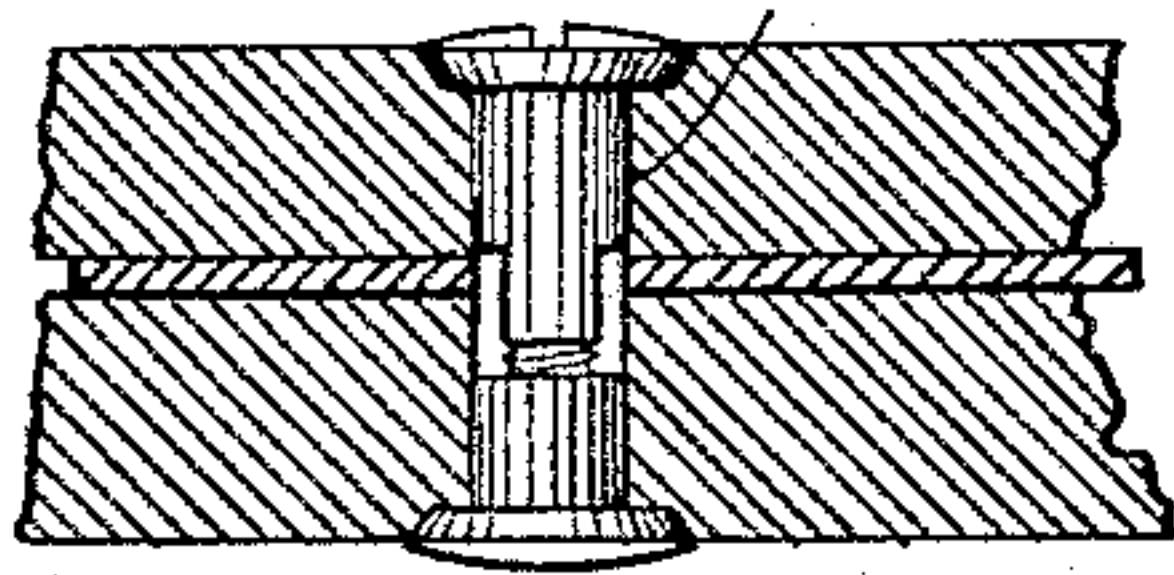


Fig. 5.

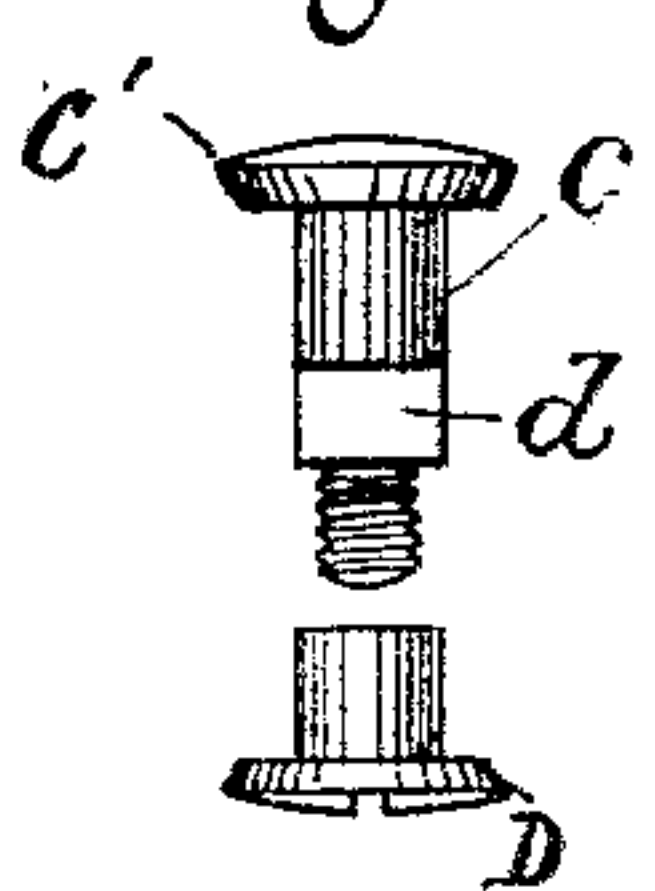


Fig. 6.

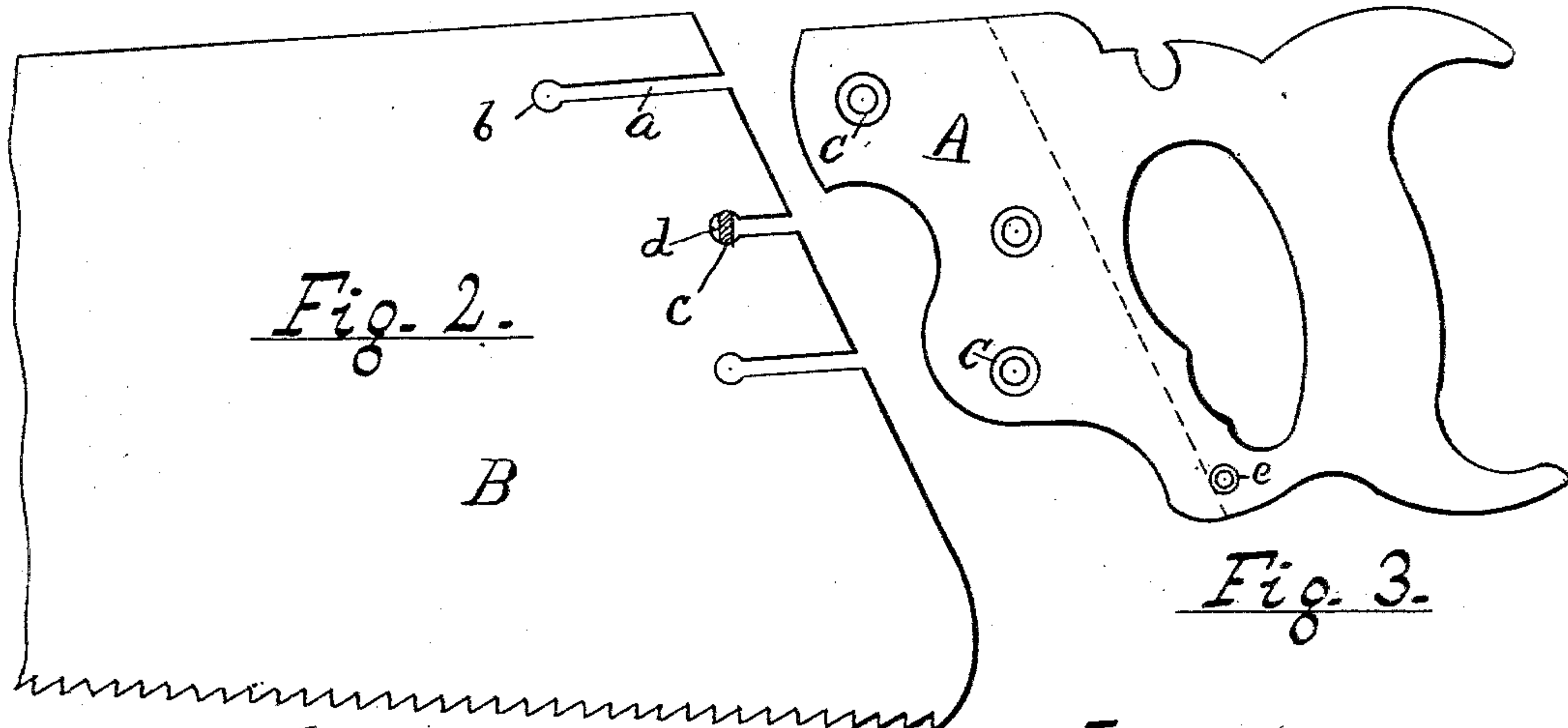
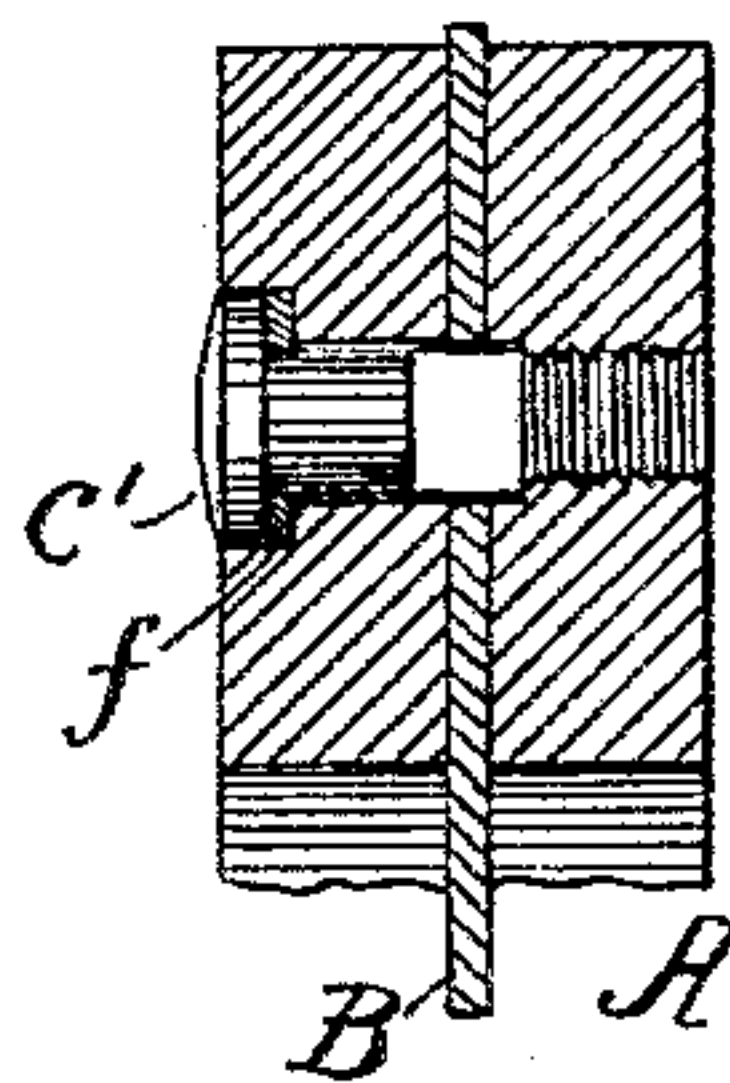


Fig. 3.

Attest.

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UNITED STATES PATENT OFFICE.

JAMES HILTON, OF NEWARK, NEW JERSEY.

SAW-HANDLE.

SPECIFICATION forming part of Letters Patent No. 323,508, dated August 4, 1885.

Application filed January 15, 1885. (No model.)

To all whom it may concern:

Be it known that I, JAMES HILTON, a citizen of the United States, residing in Newark, Essex county, New Jersey, have invented certain new and useful Improvements in Detachable Saw-Handles, fully described and represented in the following specification and accompanying drawings, forming a part of the same.

10 This invention consists in the combination, with a saw-handle, of a saw-blade provided with one or more parallel slots, each having an enlargement at its end, said handle being provided with transverse studs flattened to pass
15 through said slots into the enlargements at their ends, and the studs being turned to lock them in the enlargements and to thus retain the handle upon the blade.

My invention will be fully understood by
20 reference to the annexed drawings, in which Figure 1 is a side view of the handle fastened to the saw-blade. Fig. 2 is a side view of the saw-blade, showing the slots through which the studs pass to reach the enlargements. Fig.
25 3 is a side view of the handle detached from the saw. Fig. 4 is a section of part of a handle, with a stud flattened at that part of its length where it passes through the saw-blade, and having a nicked head at one end and a
30 screw-thread and nut at the other. Fig. 5 is a separate side view of the same stud and nut separated. Fig. 6 is a section taken on the line $x x$ in Fig. 1, showing an alternative construction for the stud with an elastic washer
35 under its head, the washer being shown in section, but not the stud. Fig. 7 is a separate edge view of the stud shown in Fig. 6.

In Figs. 4 and 7 the studs are shown edge-wise to exhibit the flattening of the shank,
40 while Figs. 5 and 6 show them in a plane of projection at right angles to such flattened faces.

In the drawings, A is the saw-handle; B, the saw-blade. a are slots extended from the
45 end of the blade to the point where the studs intersect the same. b are holes for the studs, formed as enlargements at the inner ends of the slots. c are studs inserted through the handle and blade, and flattened at d to admit
50 of their passing through the slot into the enlargement at the end of said slot. e is a head

formed on the stud, and e^2 a nick in the head, to turn the stud in the saw-handle, the nick being shown parallel with the flattened sides of the stud at d . e is a rivet in the handle to
55 strengthen it below the hand-hole.

In Figs. 6 and 7 the studs are shown as having a screw-thread at the end opposite the nicked head, and are screwed directly into the wood of which the handle is made. f is
60 an elastic washer, upon which the head of the stud presses, and by means of which the stud is held elastically, and thus kept from turning. In this form of construction it will be seen that after a time the thread made in the
65 handle by the screw-thread on the stud would wear loose in such manner that the stud would turn when the saw was in use, and that by using the washer f an elastic pressure is brought to bear upon the head of the stud to
70 hold it in the required position.

In Fig. 4 the stud, having a metallic nut, D, is shown inserted in the wood of the handle, and the slot a in contact with the flattened shank of the stud. Both head and nut are
75 provided with nicks, by which they may be turned with a screw-driver, and it is evident that if the stud does not operate to clamp the handle when turned with its shank across the slot, as at d in Fig. 2, the nut D may be turned
80 independently, and the wood thus be pinched firmly against the saw. In practice the rotation of the stud a half-turn, to slip it out of the slot a , serves to unclamp the wood sufficiently to remove the blade from the handle readily.
85

Fig. 5 shows the stud and the nut D detached from one another, the flat face upon the shank appearing plainly at d .

My invention is used as follows: The slots
90 a are formed in the handle, so that their inner ends correspond with the studs c , and the latter, when the handle is to be secured upon the blade, are turned by means of a screw-driver inserted in the nicks e^2 , so that the flattened parts of the studs will enter the slots. The
95 studs are then pressed into the bottom of the slots and turned with their flattened shanks at right angles to the slot, as shown at d in Fig. 2, thus preventing their withdrawal and effectually locking the blade into the handle.
100 A rivet held in the handle by a washer, and having one of its heads nicked and flattened

in the same way as the studs above described, may be used in the same manner; but it will be noticed that by using the form of studs provided with a nut, as shown in Figs. 4 and 5, the nut can be turned independently, and thus screwed up until the head of the stud is pressed hard against the handle, and the latter thus be effectually kept from turning. This tightening may also be accomplished when using the form of stud shown in Figs. 6 and 7, but only when the wear on the thread cut by the screw on the end of the stud in the handle is so great as to admit of the stud being turned half-way around, the flattened faces thereby bearing the same relation with regard to the slot as before. Other advantages result when these two forms of studs are used, viz., that of pressing the handle against the sides of the saw-blade, and thus preventing the handle from rattling when fastened, and they also operate to loosen the handle when it is to be taken from the blade. The rivet may be tightened at any time by giving it a blow on the head with a hammer, and by this means tightening it; but when that is done it cannot be loosened when the handle is to be detached from the saw-blade.

By using saw-blades with the detachable handle described above, one handle only is necessary for a complete set of saws, and a large number of saw-blades can thus be packed with only one handle in the same space that is required for a very small number with handles attached.

It is evidently immaterial what number of slots and studs be used to practice my invention, as the operation of each stud is the same whether combined with others or not.

My invention is especially useful to the manufacturer in cases where it becomes necessary to remove the handles from a quantity of saw-blades for retoothing, or when the latter have been etched with an improper name or mark that requires to be ground off and altered, as heretofore the fastening-screws have frequently been removed by pinching them from their nuts to the injury of the handle and the entire destruction of the screws themselves. This arose from the fact that the saw-blade could not be taken from the handle without the entire removal of the screws, and that the heads of the latter have been often so affected or defaced in polishing the handles

(after fastening on the blades) on a sand belt or wheel that the nuts could not be removed from the screws except by driving them out with a punch, and thus ruining both nut and screw.

I am aware that it is not new to slot a saw-blade and to clamp it in a handle by a pin and screw in the slot; and I am also aware that an enlargement has been formed in the end of such a slot to engage with a screw having a body formed of two sizes at separate points upon its length; but in such latter invention the screw requires to be considerably retracted before its smaller part can be brought opposite the slot. My invention differs from this in having the body flattened so as to pass through the slot when placed in the proper position, and it therefore requires a rotation of only ninety degrees to either lock or unlock the blade in the handle. Such construction also enables me to mark the head of the screw, as by the nick c^2 , so as to indicate to the operator the position of the flattened stud relative to the slot.

I therefore disclaim the prior constructions I have described, and claim my own construction as follows:

1. The combination, with the saw-blade, provided with the slot a , having enlargement b at its inner end, of the handle provided with the round stud, flattened, as described, and arranged so as to pass through the slot and to be turned at right angles thereto in the enlargement, the head of the stud having the nick c^2 , to indicate its adjustment relative to the slot, substantially as herein set forth.

2. The combination, with the saw-blade provided with slot a and enlargement b , of the stud c , flattened, as described, and arranged to pass through the slot and to be turned at right angles therewith, and provided with head c' , having a nick parallel with the flattened sides and a separate nut, e , for clamping the stud and saw-blade in the handle, substantially as shown and described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JAMES HILTON.

Witnesses:

THOS. S. CRANE,
HENRY J. THEBERATH.