

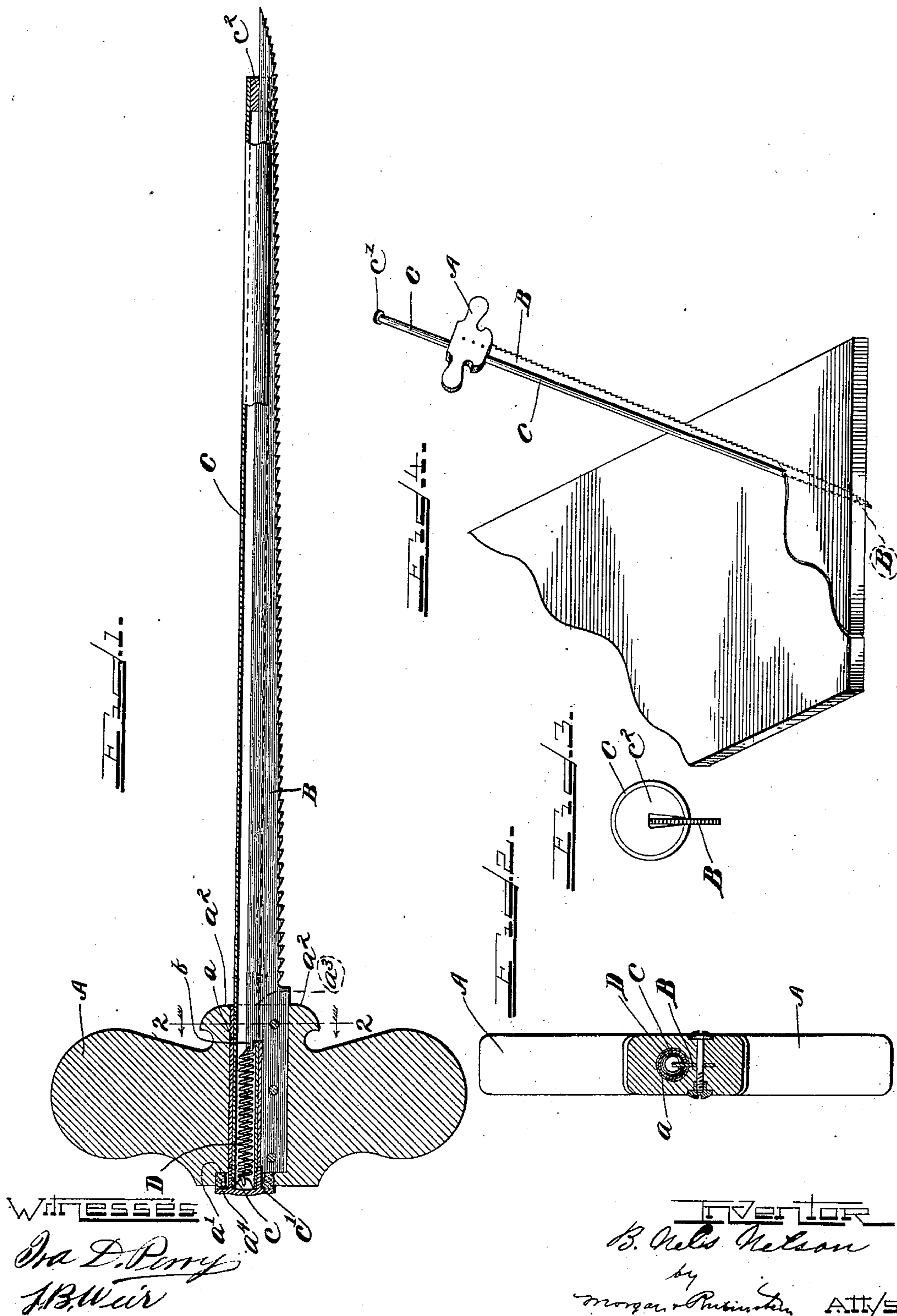
No. 673,624.

B. N. NELSON.
SAW.

Patented May 7, 1901.

(Application filed July 30, 1900.)

(No Model.)



UNITED STATES PATENT OFFICE.

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SAW.

SPECIFICATION forming part of Letters Patent No. 673,624, dated May 7, 1901.

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To all whom it may concern:

Be it known that I, B. NELS NELSON, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Saws, of which the following is a specification, reference being had therein to the accompanying drawings.

My improvement relates to that class of saws known as "compass-saws" and to all other saws having thin flexible blades which, having no end or back support, are easily bent and injured by the force of the thrust when in use.

The object of my invention is to provide a back for all saws of the kind hereinbefore mentioned which will so support all that part of the saw-blade between the saw handle or holder and the wood operated upon that the blade cannot bend under the heaviest direct pressure, and to thereby enable the operator to use the finest and thinnest saws for sawing scroll and other work with a maximum of force without injury to the saw-blade by bending; further, by providing a double handle for handwork to give the operator full control over the saw and to enable him to operate with full force in any direction.

The way in which I attain my object is as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a sectional view of the saw, the back and several parts in position when the saw is not in use. Fig. 2 is a cross-section through the line 2 2, Fig. 1. Fig. 3 is a view of the end of the back and saw-blade. Fig. 4 is a perspective view showing the movement of the back when the saw is in use.

The same letters indicate the same parts in the several views.

In the several drawings, A is the handle of the saw, made double-slotted to receive the saw-blade and fitted with a tube a through its center, extending from the enlarged recess at a' to the face a^2 . This tube is slotted a short distance at a^3 to receive a part of the saw-blade. A rubber ring a^4 is affixed in the recess a' and projects slightly beyond the handle to form a cushion, the purpose of which will hereinafter be described.

B is the saw-blade, constructed so as to be affixed to the handle in the usual way and

having a slight projection b attached to or made an integral part of the saw-blade, arranged to hold a spiral spring, hereinafter described.

C is a back having a longitudinal opening along its full length. One end c of this back is threaded and provided with a cap c' . The other end c^2 is made solid and slotted to the center of its diameter with a V-shaped slot, (see Fig. 3,) the external lines of said slot corresponding with the opening in the back C.

D is a spiral spring attached to the saw-blade B and to the cap c' .

When the several parts herein shown and described are assembled and affixed together as shown in Fig. 1, my improvement is complete and the saw is ready for use, with the saw-blade protected as within a sheath, as the range of construction may provide for covering the entire blade, if desirable.

When in use on thin soft wood, the saw-point may be thrust right through and the cut be so started without injury to the saw-blade. With thick or hard wood the usual starting-hole must be made if the cut does not start from the outside edge. As soon as the cut is started from the edge or through the solid wood the end c^2 of the "back" comes in contact with the wood operated on and is pressed thereon by the pressure of the spring D during each thrust and withdrawal, the back moving back and forth through the handle, as shown in Fig. 4, till the cut is finished and the saw withdrawn.

During the whole operation all that part of the saw-blade above the teeth and between the wood operated on and the handle of the saw is covered by the back as it slides back and forth with the thrusts of the operator, holding the saw-blade in line and permitting the use of a maximum of force without injury to the saw-blade by buckling.

The back when held by the operator near the point of contact with the wood enables the operator to increase the pressure of the cut and guide the direction of the saw.

The double handle enables the operator to cut forward and upward with nearly the same ease and force as in the other directions and permits the back as it projects from the handle to pass over and above the operator's hand and forearm whichever way the cut is being

made. Whenever the back during an operation is suddenly released by passing through or outside of the wood which is being cut, the flange on the cap *c'* strikes on the rubber
5 cushion *c*⁴, preventing injury to the spring or other parts connected or in contact.

Having shown and described my improvement, so that one skilled in the art may understand and construct the same, what I claim,
10 and desire to secure by Letters Patent, is—

1. The combination of a saw-blade having a double handle, the said handle having an aperture through it on a line central with the back of the said saw, with a tube threaded to
15 receive a cap at one end and slotted longitudinally, and provided with a solid V-shaped bearing adapted to rest on the back of the said

saw and to slide thereon through the aperture in the double handle, substantially as shown and for the purposes specified. 20

2. The combination of a saw having a double handle, the said handle having an aperture through it on a line central with the back of said saw, and a tube slotted and adapted to slide on the back of said saw and through the
25 aperture in the said handle with a spiral spring attached to the said saw, and being within the said tube, and attached to a cap thereon, as and for the purposes specified.

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Witnesses:

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