

(No Model.)

N. B. KEYES.
SHEET METAL PLIERS.

No. 438,848.

Patented Oct. 21, 1890.

Fig 1

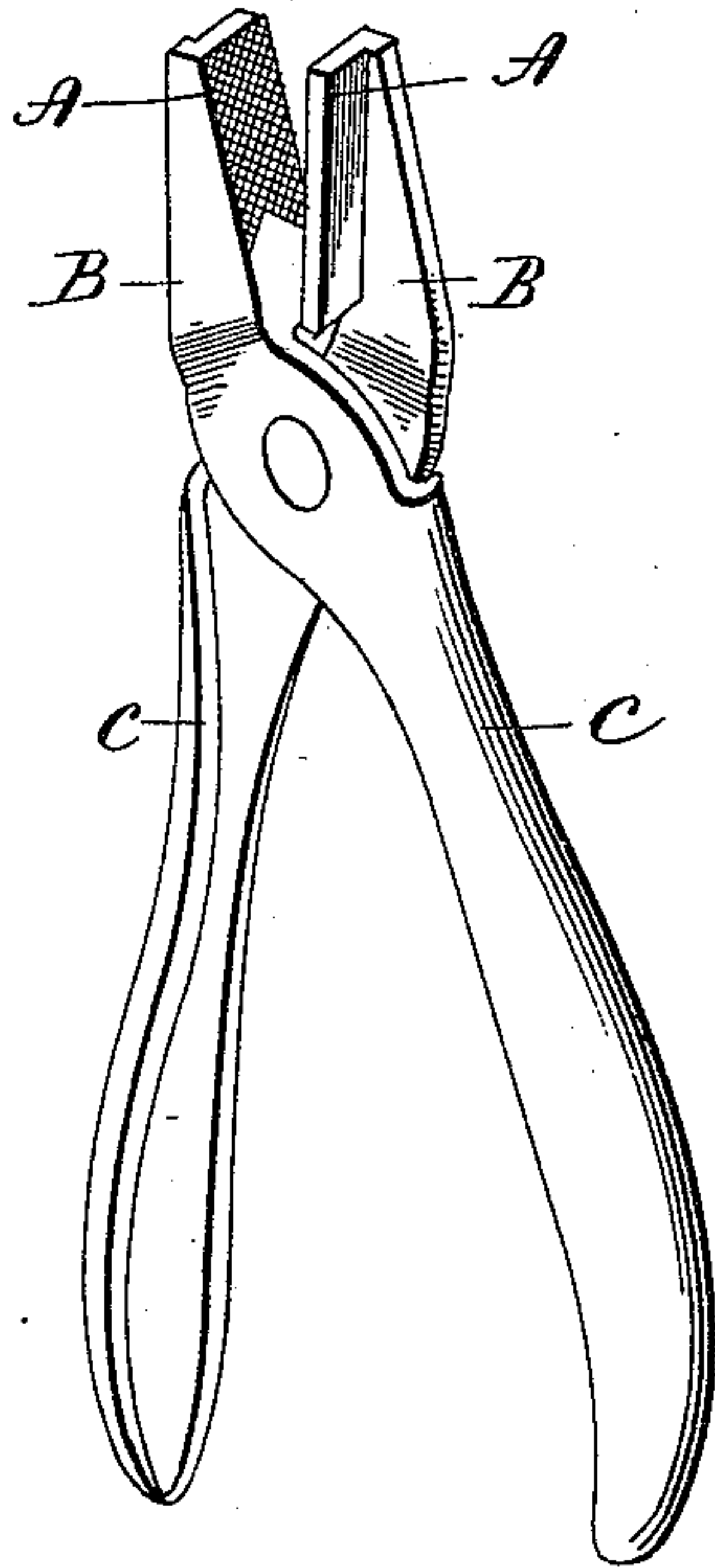
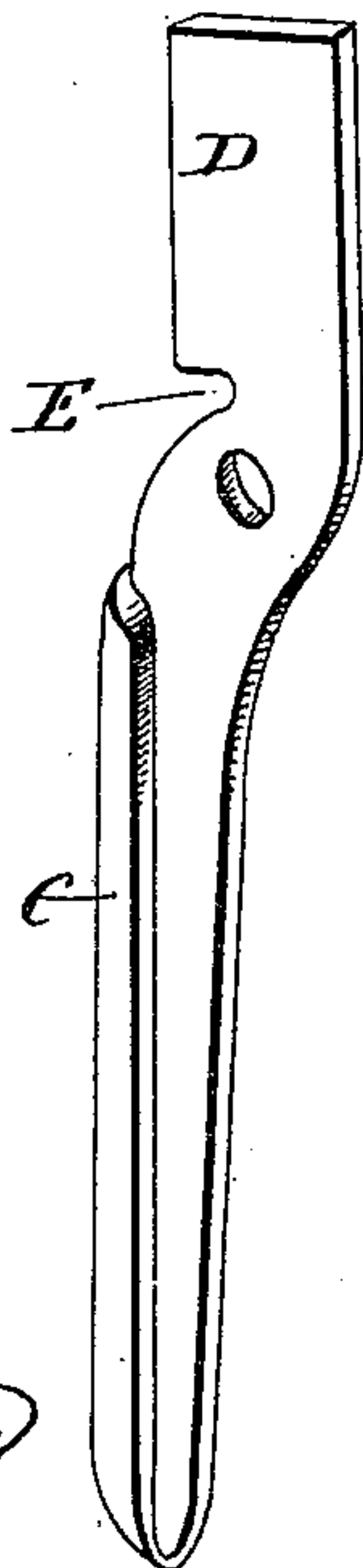


Fig. 2



Witnesses.
J. H. Shumway
Lillian D. Keyes

Nelson B. Keyes
Inventor.
By Atty.
Earle Seymour

UNITED STATES PATENT OFFICE.

NELSON B. KEYES, OF UNIONVILLE, CONNECTICUT.

SHEET-METAL PLIERS.

SPECIFICATION forming part of Letters Patent No. 438,848, dated October 21, 1890.

Application filed August 29, 1890. Serial No. 363,403. (No model.)

To all whom it may concern:

Be it known that, NELSON B. KEYES, of Unionville, in the county of Hartford and State of Connecticut, have invented a new
5 Improvement in Sheet-Metal Pliers; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the
10 same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a perspective view of a pair of pliers constructed in accordance with my invention. Fig. 2 is a detached perspective
15 view of one of the plier members partly developed from its blank.

My invention relates to an improvement in sheet-metal tools, and more particularly to pliers, the object being to produce a simple,
20 cheap, light, and effective instrument.

With these ends in view my invention consists in sheet-metal pliers having the gripping-faces of their jaws extended transversely to the plane of the instrument and in certain
25 details of construction, as will be hereinafter described, and pointed out in the claims.

In carrying out my invention I form the gripping-faces A A of the jaws B B of the plier members C C by providing an extra
30 width of metal in the blanks, as shown at D in Fig. 2 of the drawings, forming a notch E at its inner end, and bending it to extend transversely across the plane of the instru-

ment, by which I mean a plane longitudinally intersecting both of its members. As herein
35 shown, the said faces are bent to extend squarely across the said plane and roughened; but, if desired, they may be curved to correspond to the curved gripping-surfaces of the so called "round-nosed pliers," which may
40 also be produced under my invention.

My improved tool if properly made is very stiff and light, and is both cheap to make and effective in use.

I do not broadly claim a sheet-metal tool, as
45 instruments akin to mine and made of sheet metal are old.

Having fully described my invention, what I claim as new, and desire to secure by Letters
50 Patent, is—

1. Sheet-metal pliers having the gripping-faces of their jaws extended transversely across the plane of the tool, substantially as
described.

2. Sheet-metal pliers having the gripping-
55 faces of their jaws extended squarely across the plane of the tool and roughened, substantially as described.

In testimony whereof I have signed this
specification in the presence of two subscrib-
60 ing witnesses.

NELSON B. KEYES.

Witnesses:

W. A. HITCHCOCK,
JULIA BOYLE.