74241

A. U. Noble's
Revolving Spring Punch.

PATENTED
FEB 11 1868

fig 4

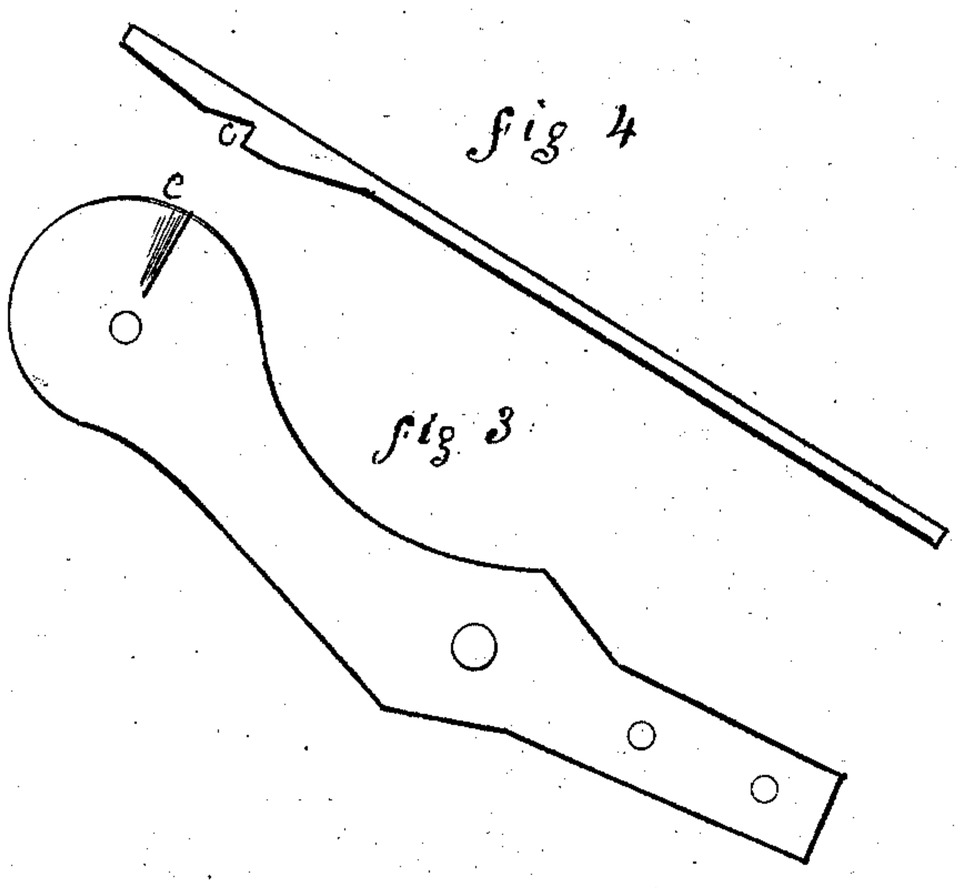
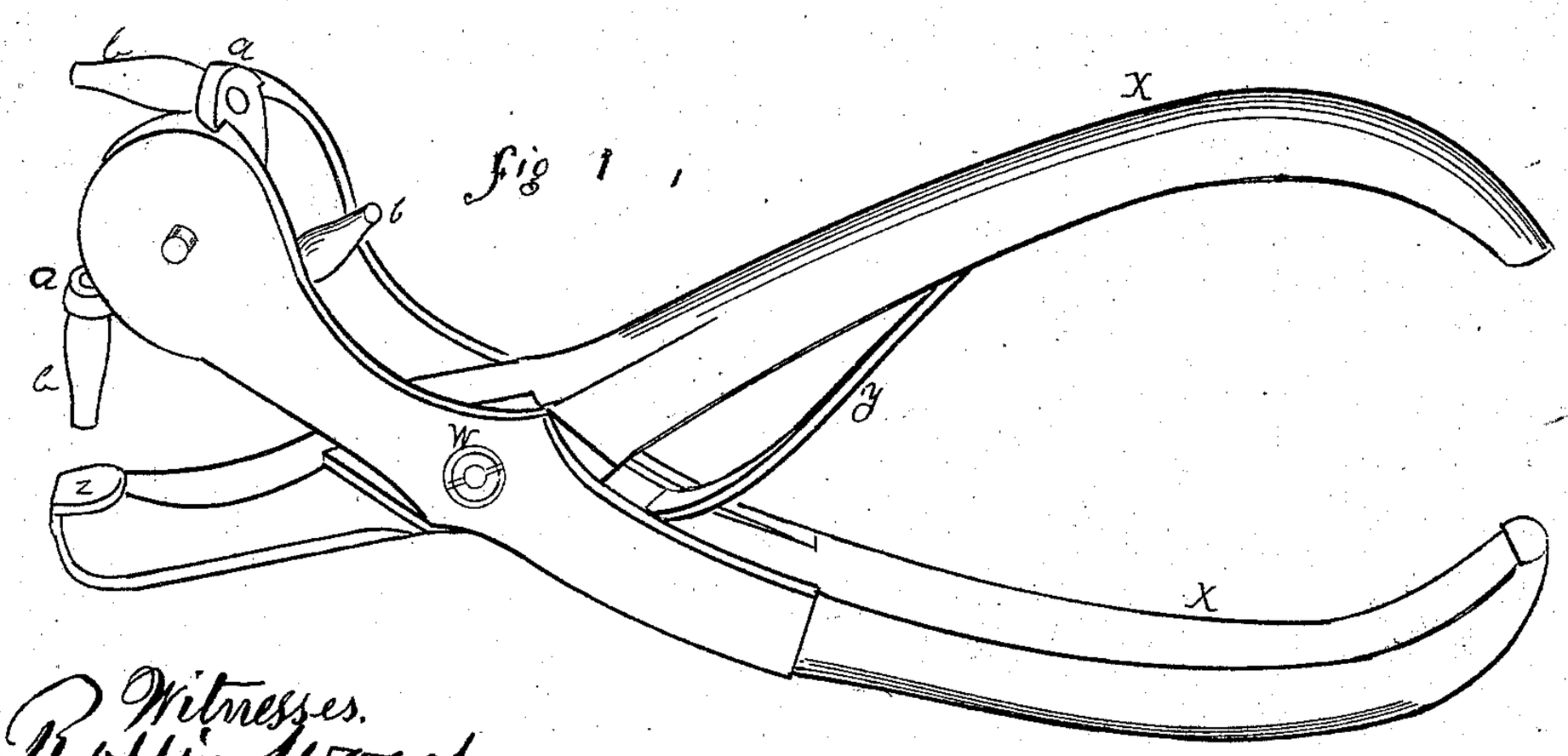


fig 3

fig 2

fig 1,



Witnesses.
Rollin Wood
F. H. Lawton

Inventor.
Albert Utley Noble

United States Patent Office.

ALBERT UTLEY NOBLE, OF KALAMAZOO, MICHIGAN.

Letters Patent No. 74,241, *dated February* 11, 1868.

IMPROVED SPRING-PUNCH.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ALBERT UTLEY NOBLE, of Kalamazoo, county of Kalamazoo, and State of Michigan, have invented a new and useful Revolving Spring-Punch; and I do hereby declare that the following is a clear, full, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification.

The general construction of my revolving spring-punch, with the exception of the arrangement of the revolving head and its attachments, as hereinafter described, is precisely the same as the ordinary single-barrel spring-punch. The form of joint, the attachment of the spring, and the cutting-plate, are the same. The handles may be modified in form and in length of leverage, if desirable.

Figure 1, of the drawing, is a perspective side view of my revolving punch in the usual form.

X X, the handles; Y, the spring; Z, the cutting-plate; *a a a*, the arms of the revolving head; *b b b*, the punches attached; W, the joint. The upper jaw, made with an enlargement of circular form at its extremity, as shown in the drawing, is cleft perpendicularly, and the two side bars thus formed are separated, to include a space with parallel sides, sufficient for the reception of the revolving head. The revolving head, shown at Figure 2, is made of steel, iron, or other metal, is of a uniform thickness sufficient to admit of the attachment of the barrels or punches. The three arms *a a a* are of equal size, and equidistant from each other. To each of the arms are inserted and fixed, in the usual manner, the punches *b b b*, which may be of different sizes. The punches are of the usual form, open at the top, to permit the discharge of chips, and are attached to the arms in the position represented in the drawing. At the centre of the revolving head is a hole, for attaching the shaft or pinion on which it turns. The revolving head, thus constructed, is mounted between the side bars, holes being made there for the reception of its pinion. When mounted, the pinion is fixed firmly in the revolving head, but turns loosely in the side bars, and the side bars, being made thin and elastic, act as springs, holding closely to the revolving head. On both of the inner sides of the side bars, I make a notch or recess, in shape and size corresponding respectively with the arms of the revolving head. The back portion of this recess is made square, while its anterior portion is rounded or inclined.

Figure 3 is an inside view of one of the side bars detached. C shows the form and location of the recess or notch.

Figure 4 is an edge view of fig. 3, C showing the recess on the top edge.

When the punch is in use, the position of the barrel employed in the act of cutting is perpendicular to the cutting-plate, and the arm of the revolving head, immediately behind, rests in the recess or notch at C, which serves as an abutment to prevent the revolving head from turning back. To bring another punch into action, the revolving head is rotated forward. As the pinion turns loosely in the side bars, but is fixed to the head, the arm slides over the rounded or inclined portion of the notch C, spreading the side bars slightly asunder. When the punch is in position, the arm, immediately behind, falls into the notch C, and is held firmly by the lateral pressure of the spring side bars. Thus different sizes are brought into use.

The advantages of this form of revolving punch are, the combination of three different sizes of punch in one tool. The construction of the punch-barrel, and its position in the act of cutting, are precisely similar to that of a common single-spring punch, and it as readily clears itself of chips. The relative position of the several punches is such as to afford room for the strap or article operated upon, limited only by the length of jaw.

I am aware that revolving spring-punches of divers forms are old and well known. I therefore make no claim to spring-punches with revolving heads, as such; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

The form and construction of the revolving head, and punches attached, as herein described, in combination with the spring side bars for holding and mounting the same, substantially as herein set forth.

ALBERT UTLEY NOBLE.

Witnesses:

ROLLIN WOOD,

F. M. DUNBAR.