

H. CURTIS.  
Wire-Band Cutter.

No. 210,190.

Patented Nov. 26, 1878.

Fig. 1.

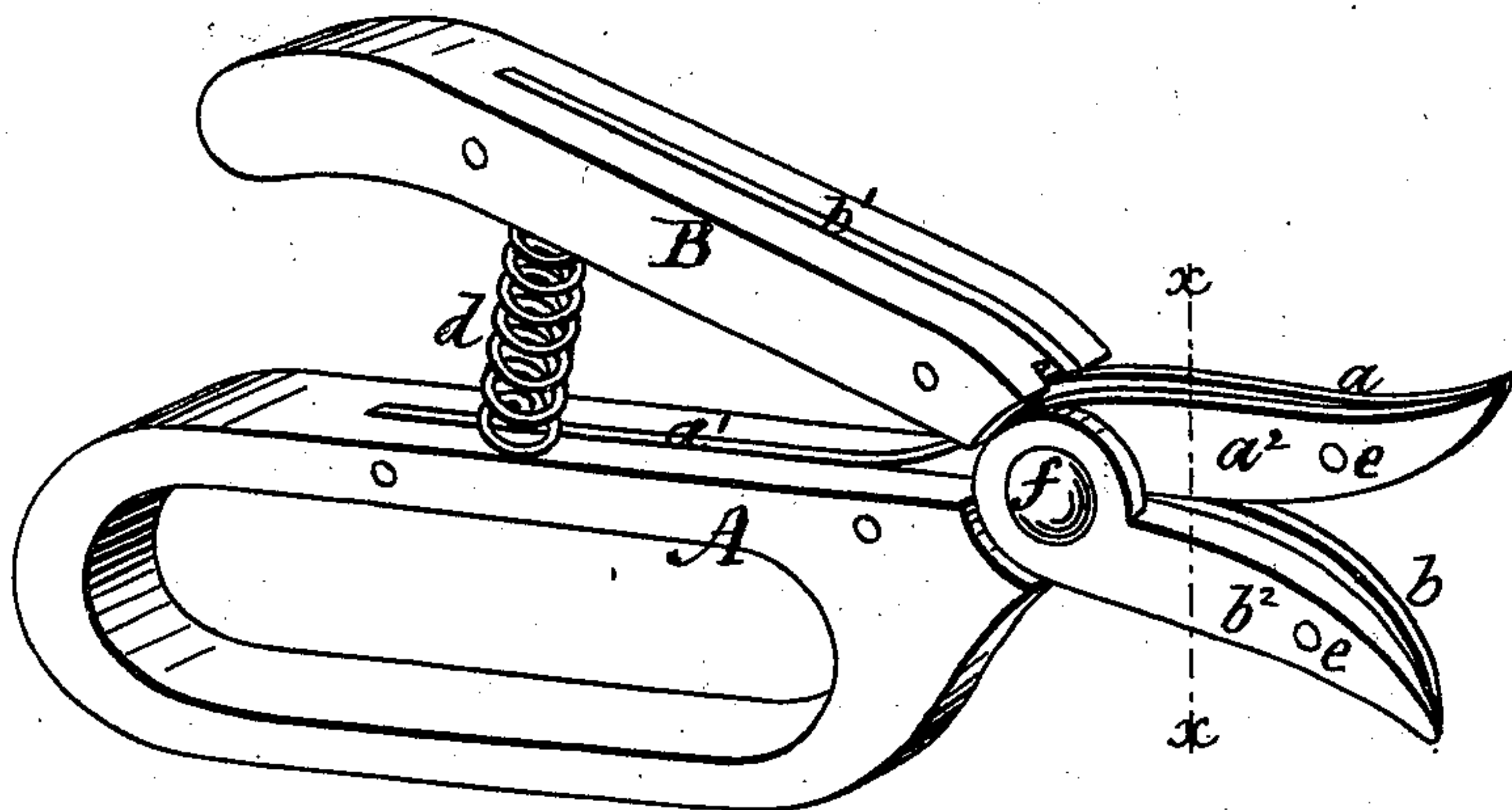


Fig. 2.

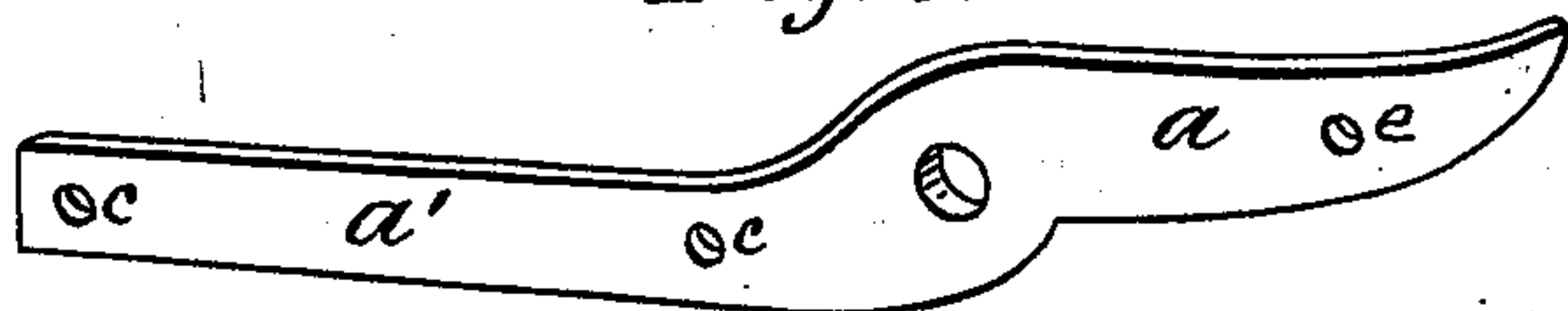


Fig. 3.

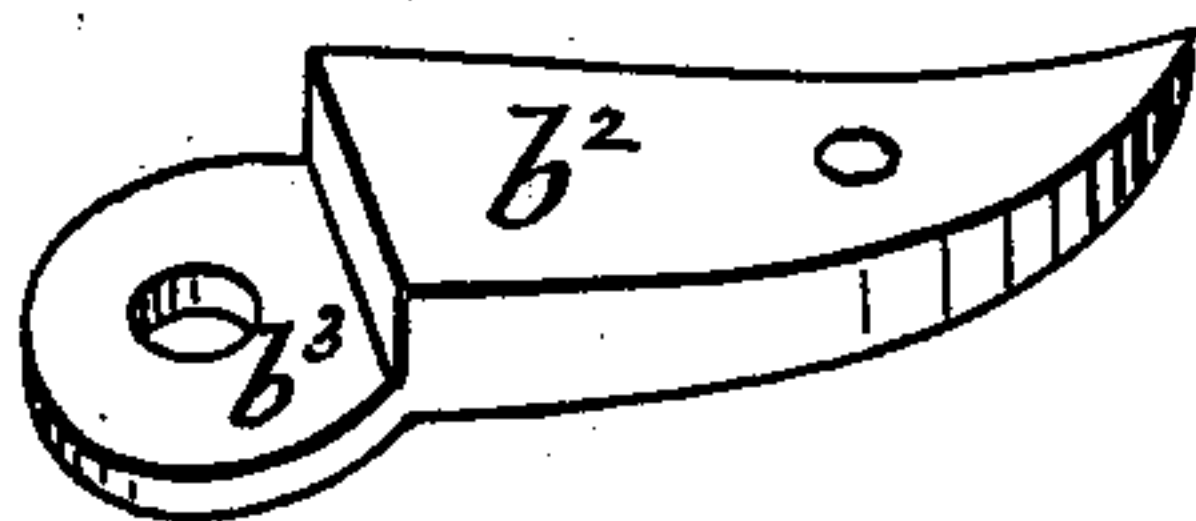


Fig. 4.

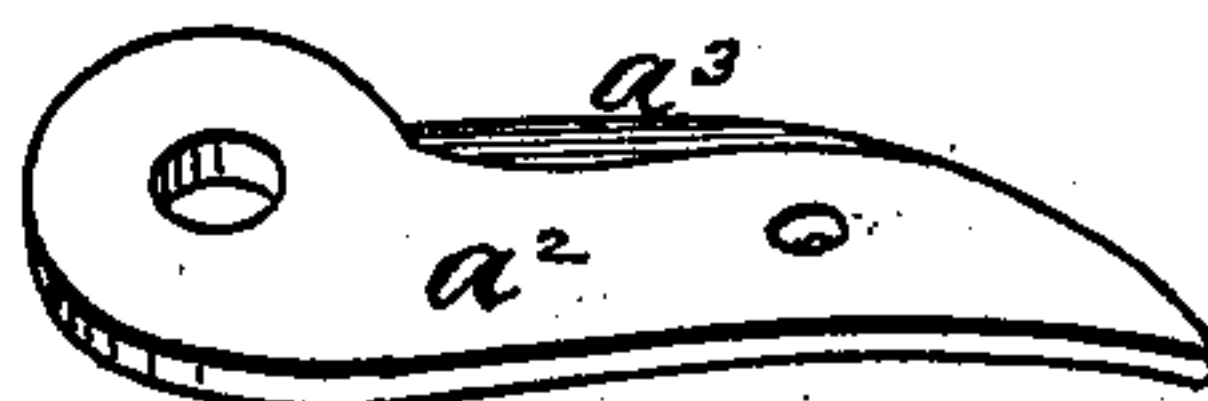
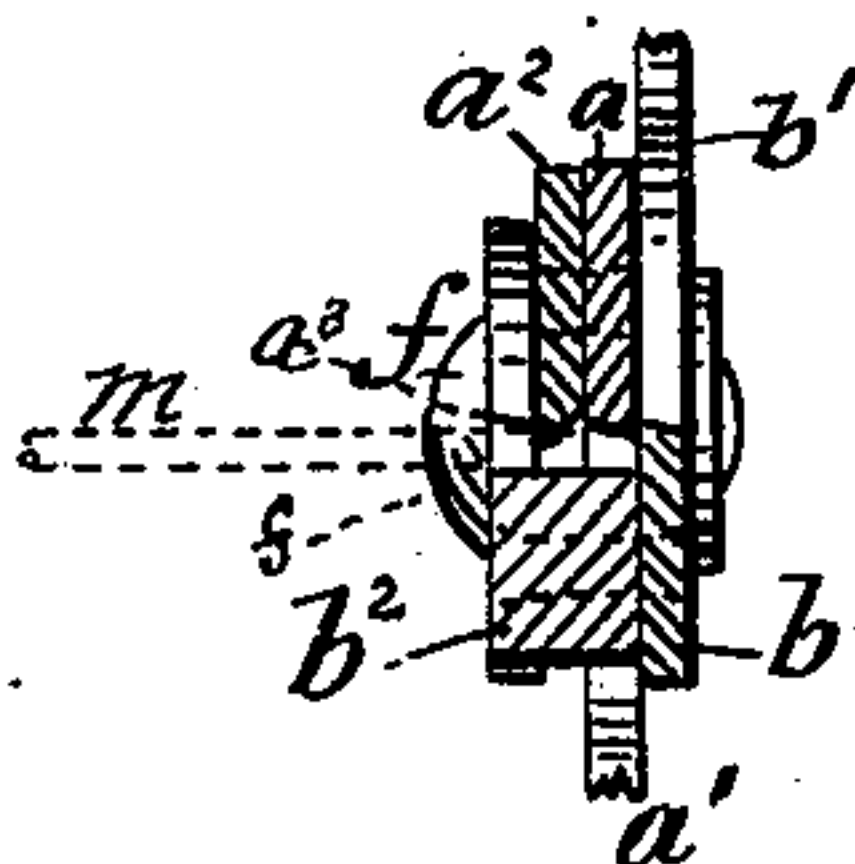


Fig. 5.



Witnesses:  
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Inventor:  
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# UNITED STATES PATENT OFFICE.

HENRY CURTIS, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-FOURTH OF HIS  
RIGHT TO J. RUSSELL PARSONS, OF HOOSICK FALLS, NEW YORK.

## IMPROVEMENT IN WIRE-BAND CUTTERS.

Specification forming part of Letters Patent No. **210,190**, dated November 26, 1878; application filed  
September 10, 1877.

*To all whom it may concern:*

Be it known that I, HENRY CURTIS, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Shears for Cutting Wire Bands, and for other purposes, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 represents a perspective view of the shears complete. Fig. 2 represents a perspective view of a plate forming one of the cutting-blades. Figs. 3 and 4 represent views in perspective of the band-grasping devices detached from the cutting-blades. Fig. 5 represents a vertical section on line  $xx$  of Fig. 1.

My invention relates to the construction of shears for cutting bands of wire or other material, made in such manner as to retain one end of the band so severed, and withdraw it from a sheaf in the operation of thrashing grain which has been bound by a wire, cord, or other material.

My invention consists in the peculiar construction of the cutting-shears, and in their combination with wire indenting and retaining clamps attached to the cutting-shears to firmly hold one end of a wire band after it is cut.

In the drawings,  $a$  and  $b$  represent the two cutting-blades of the shears. These blades are similar in form, or nearly so. They are made, as shown in Fig. 2, of a flat steel plate, cut in a partly-circular form at one end, so that, when united, the blades will be flaring from each other, to facilitate the reception of the band between them, and the other end of each blade is straight, as shown at  $a^1 b^1$ , and is perforated at  $c c$  for the passage of rivets, by which they are connected to the handles. These handles A and B can be made of wood or other material, to be light and easy to handle.

For the purpose of convenience, and as a protection to the hand, I make the handle A bow-shaped, while the other is a simple limb, slightly turned down at the end. Between the two arms A and B of the shears there is a spring,  $d$ , to press the blades of the shears apart after a band has been cut.

To grasp a wire band while cutting it, or after it has been cut, I attach to one side of each blade, by means of rivets  $e$  or otherwise, one of the plates shown in Figs. 3 and 4, the two forming a pair. (The views in these fig-

ures represent the opposite side to the one shown in Fig. 1.)

The plate  $b^2$ , being about three times the thickness of the plate  $a^2$ , is made to support and receive the wire, while the plate  $a^2$  forces it down against the cutting-edge of the blade  $b$  and upon the plate  $b^2$ , and indents it about an eighth of an inch from the cut edge. For this purpose the edge of the plate  $a^2$  is beveled at  $a^3$  to form a blunt edge, with which the band-wire  $m$  is indented and securely retained in contact with the plate  $b^2$  by the operator at the same instant that he cuts the wire with the blades  $a$  and  $b$  of the shears.

The plate  $b^2$  is recessed at  $b^3$ , to form, in connection with the side of the blade  $b$ , at and around the pivot or uniting-rivet  $f$ , side supports for the cutting-blade  $a$  and for the wire crimping or indenting plate  $a^2$ , thus producing a strong band-cutting device, in which the cutters cannot be sprung or forced apart by the wire while cutting it.

I am aware that it is not new to provide wire-cutting shears with a pair of rectangular wire-retaining ledges, and that these ledges have been made of elastic material or of metal, either plain or serrated; but these cannot be depended upon to jerk a wire from around a sheaf and against the weight of a sheaf. For this reason other retaining devices have been used, with diverging cutters to bend the free end of the band between the side of one of the shear-blades and the frame; but this mode has its defects. It requires much power to cut, bend, and jam the wire, the jamming sidewise soon strains the instrument, and it requires nearly as much power to release the wire as to cut, bend, and jam it fast to the instrument.

Having now fully described my invention, I claim—

In shears for cutting wire bands, the combination of a cutting-blade,  $b$ , to which is attached a receiving plate or ledge,  $b^2$ , recessed at  $b^3$ , and provided with a loop through which the pivot  $f$  passes, with a second cutting-blade,  $a$ , provided with a plate,  $a^2$ , chisel-beveled at  $a^3$ , and clasped between the branches of the cutting-blade  $b$ , substantially as shown and described.

HENRY CURTIS.

Witnesses:

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