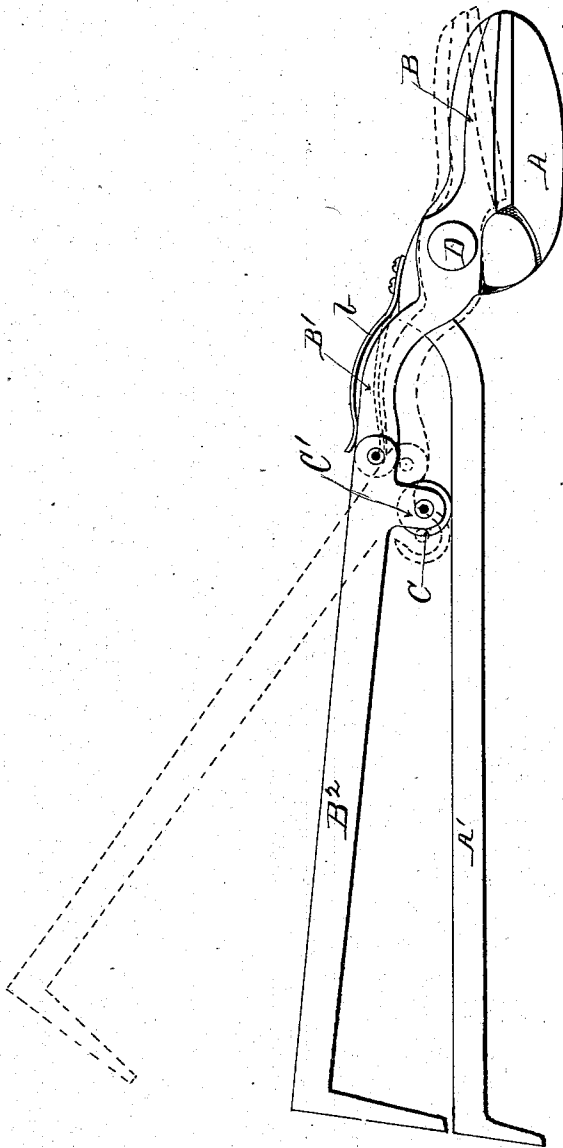


(No Model.)

W. J. BAYRER.
SCISSORS AND SHEARS.

No. 295,718.

Patented Mar. 25, 1884.



Witnesses.
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#

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UNITED STATES PATENT OFFICE.

WILLIAM J. BAYRER, OF SOUTHTON, CONNECTICUT.

SCISSORS AND SHEARS.

SPECIFICATION forming part of Letters Patent No. 295,718, dated March 25, 1884.

Application filed January 8, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. BAYRER, a citizen of the United States of America, residing at Southington, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Tinners' Shears, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in tinners' shears; and the object of said invention is to produce a pair of tinners' shears which shall be self-opening when the handles are released, and in which great purchase or leverage is given to the working-handle, and in which friction is obviated, and the fulcrum-point of the handles is changed as the jaws are closed or opened. To accomplish these objects a spring is provided to bear upon one of the handles and keep the blades normally open. The handle which is to be moved is jointed, and the part thereof which is to be taken in the hand is provided with a roller, which bears against the opposite handle and forms a moving fulcrum for the moving or working handle, and at the same time obviates all friction.

Nippers having a jointed handle, by means of which the purchase or leverage is increased, have heretofore been known, as also nippers with a spring set to bear under one jaw to keep it normally away from the other jaw, one of the handles of said nippers being made in two parts, one of which impinges upon and operates the other, and each of which is pivoted to the opposite handle at separate points. I lay no claim to such construction.

The following description and claims will indicate the novel features of my said invention and the manner in which I construct the same.

The accompanying drawing illustrates what I consider the best means for carrying my invention into practice.

The figure is a side elevation, showing the shears closed in heavy lines and open in dotted lines.

A is the blade secured to the handle A', which in the ordinary use of the device will rest upon the bench.

B is the blade which is moved to do the shearing. It is formed with a short portion of the handle B'.

A spring, *b*, attached to the handle A', bears upon the portion B', and tends to keep the blades open.

To the portion B' is pivoted the portion B² of the handle, which is taken hold of to operate the shears. The roller C is held by the portion B² near the pivot end, and when the blades are compressed this roller rides upon the opposite handle, A', and approaches the main pivot D, by which the blades are united, so that the position of the fulcrum is constantly changing and the power of the shears increased thereby, while at the same time the action of the handles upon each other is deprived of much of the friction which would otherwise exist were it not for this roller.

It will be seen that the opening of the handles would not of itself open the blades; but the spring *b*, acting to open them as soon as the pressure is removed from the handles, insures that they shall be opened after each operation. This spring also tends to make the action of the cutting-edges uniform throughout an entire cut, as it keeps a steady pressure upon the portion B' of the moving handle. The roller C has bearings in brackets C', formed on the handle B².

Although I have shown the invention applied to bench-shears, yet it will be understood that it is equally well adapted for use upon hand-shears and all sorts of nippers.

Having thus described my invention, what I desire to claim is—

1. In tinners' shears or analogous implements, the lever or operating portion B² of the handle, pivoted to the part B', which is rigidly connected with the blade or jaw, said lever or portion B² being provided with a bracket or arm and roller carried thereby, adapted to ride upon the opposite handle, substantially as set forth.

2. In a pair of shears or analogous implement, the combination, with the blade A and handle A' and blade B and part handle B', of the spring *b*, secured to one part, as A', and bearing upon the other, as B', and an operating-handle, B², pivoted to B', and having a roller, C, to bear upon the opposite side, A', as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

Witnesses: WILLIAM J. BAYRER.

GEORGE TERRY,
HIRAM A. GRAY.