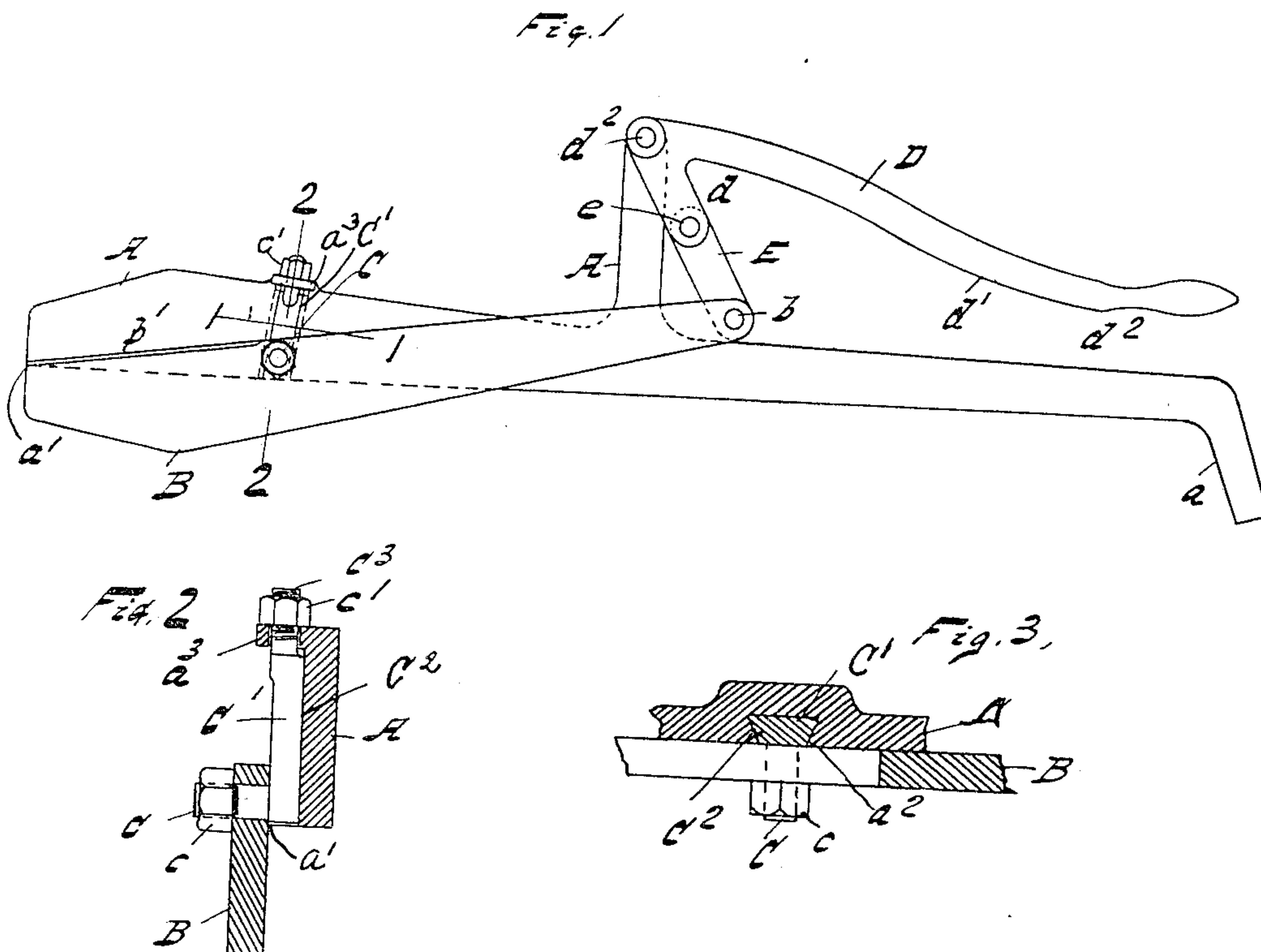


No. 818,578.

PATENTED APR. 24, 1906.

C. SWAN.  
PLATE SHEARS.  
APPLICATION FILED DEC. 1, 1904.



Witnesses  
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# UNITED STATES PATENT OFFICE.

CHARLES SWAN, OF CORRY, PENNSYLVANIA.

## PLATE-SHEARS.

No. 818,578.

Specification of Letters Patent.

Patented April 24, 1906.

Application filed December 1, 1904. Serial No. 235,128.

*To all whom it may concern:*

Be it known that I, CHARLES SWAN, a citizen of the United States, residing at Corry, in the county of Erie and State of Pennsylvania, have invented new and useful Improvements in Plate-Shears, of which the following is a specification.

This invention relates to plate-shears; and it consists in certain improvements in the construction thereof, as will be hereinafter fully described, and pointed out in the claims.

The invention is illustrated in the accompanying drawings as follows:

Figure 1 shows a side elevation of the shears; Fig. 2, a section on the line 2 2 in Fig. 1; Fig. 3, a section on the line 1 1 in Fig. 1.

A marks the fixed blade, and B the movable blade. These are of course purely relative terms. Either or both may be the movable blade; but in the ordinary use of said blades one is ordinarily secured to the base and remains stationary. The fixed blade has the turned end  $a$  for securing it to the bench. The blades are provided with the cutting edges  $a'$  and  $b'$ .

As shown, the mechanism for operating the shears is similar to that described and claimed by me in my application filed March 21, 1904, Serial No. 199,183, and consists of the post  $A'$ , extending from the fixed blade, on which is pivoted at  $d^2$  the handle D. The part  $d'$  of the handle forms one arm of the bell-crank lever, the other arm of the bell-crank lever being pivoted at  $e$  to a link E. The link E is pivoted at  $b$  to the movable blade B. The handle D is provided with the usual rounded portion  $d^2$ , better adapted to the hand. It will be readily observed that as the handle is operated the movable blade through the action of the toggle-levers  $d$  and E is opened and closed.

The blades are pivoted on the pivot-pin C. I have found that it is desirable to have this pivot adjustable, so that the edges of the blades may be changed relatively to each other and to the pivot for different thicknesses of metal and also for taking up the wear on the cutting edges of the blades. I have shown a preferable means of accomplishing this adjustment. The pivot-pin C

extends from a bolt  $C'$ , which preferably has the dovetailed portion  $C^2$  and screw-threaded portion  $C^3$ . The dovetailed portion slides in a dovetailed groove  $a^2$  in the fixed blade, and the screw-threaded portion extends through the perforated gear or lug  $a^3$ . A nut  $c'$  is arranged on the screw-threading portion for adjusting the bolt, and thus adjusting the pivot. The usual nut  $c$  is provided on the pivot-pin for keeping the shears tight. By this construction the relation of the pivot to the cutting edges may be changed, so that with different thicknesses of metal the same relation between the cutting edges and the pivots may be maintained. This permits of the best possible arrangement of the parts for each thickness of metal. It also permits of the adjustment of the blades to take care of the wear, so that they may be brought into the best possible relation for the thickness of the metal, notwithstanding any wear or change in shape of the blades due to wear.

What I claim as new is—

1. In a plate-shears the combination with the blades; of a pivot for said blades movable relatively to one of said blades to permit of the adjustment of the cutting edges of the blades toward and from each other and transversely to the axis of the pivot; and means for adjusting the pivot.

2. In a plate-shears, the combination with the blades; a sliding bolt mounted on one of said blades; means for adjusting said bolt relatively to said blade; and the pivot-pin carried by said adjustable bolt and extending at right angles to the line of movement of the blade, the other of said blades being mounted on said pivot-pin.

3. In a plate-shears, the combination with the blades, one of said blades having a dovetailed slot; a dovetailed bolt arranged in said slot; means for adjusting the bolt in the slot; a pivot-pin carried by said bolt and extending at right angles to the line of movement of the blade, the other of said blades being mounted on said pivot-pin.

4. In a plate-shears, the combination with the blades A and B, the blade A having the dovetailed slot  $a^2$  therein; the bolt  $C'$  having the screw-threaded portion  $C^3$  and the dove-

tailed portion  $C^2$  arranged in said slot; lug  $a^3$  extending from the blade A and having a perforation through which the screw-threaded portion  $C^3$  extends; the nut  $c^2$  on said screw-threaded portion; the pivot-pin C on the bolt  $C'$ ; the jaw B mounted on said pivot-pin C.  
In testimony whereof I have hereunto set

my hand in the presence of two subscribing witnesses.

CHARLES SWAN.

Witnesses:

C. D. HIGBY,  
M. C. SULLIVAN.