

(No Model.)

F. CELCE.

SHEARS.

No. 355,299.

Patented Jan. 4, 1887.

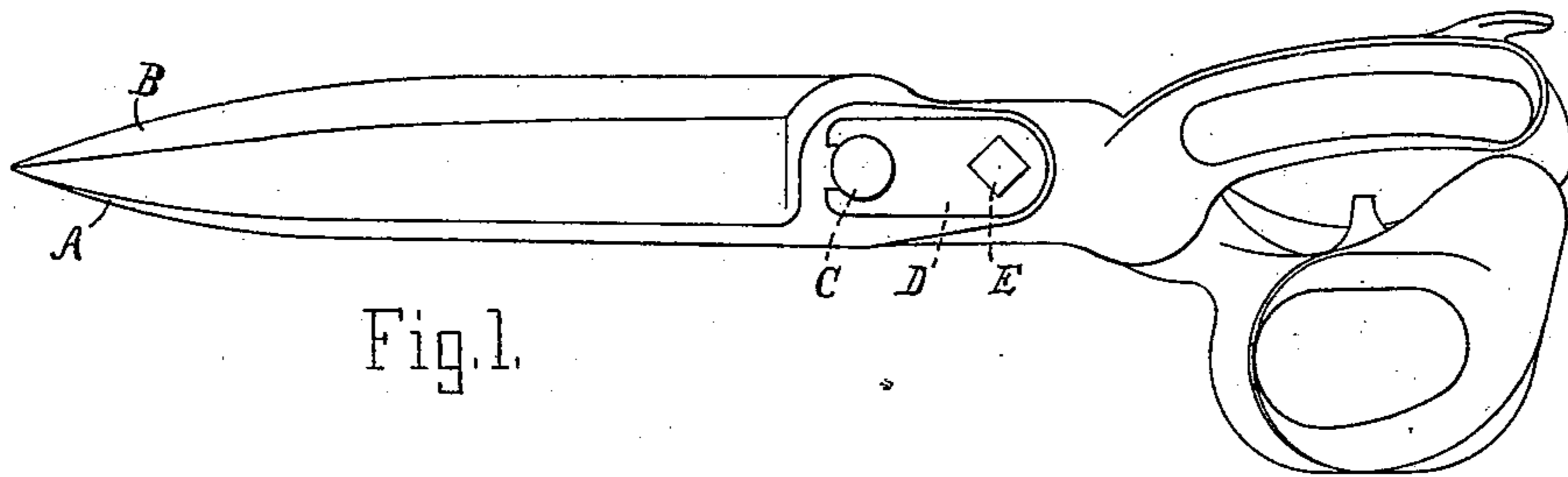


Fig. 1.

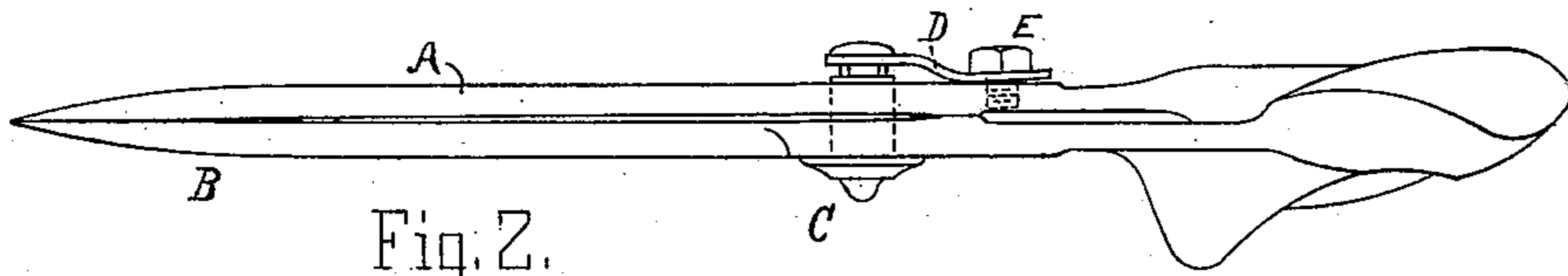


Fig. 2.

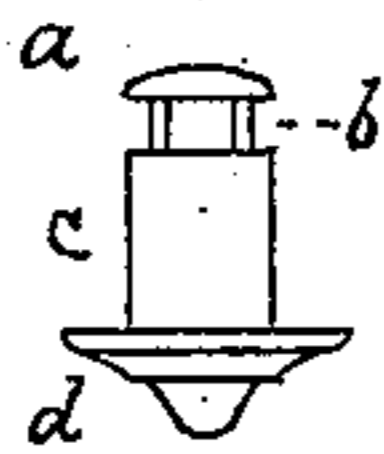


Fig. 3.

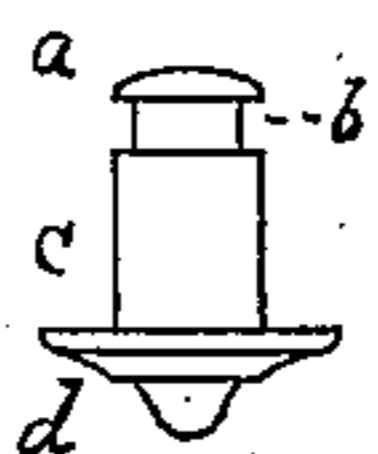
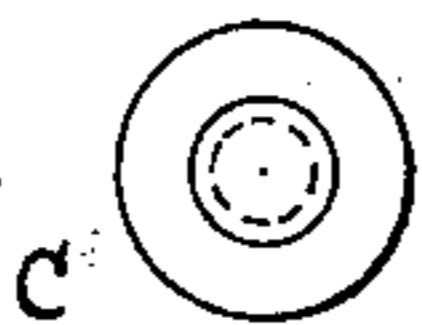


Fig. 4.

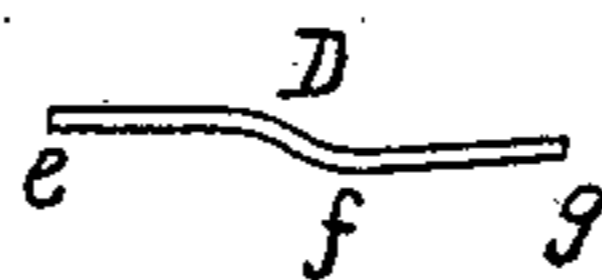
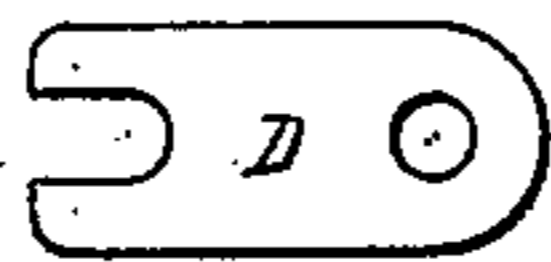


Fig. 5.

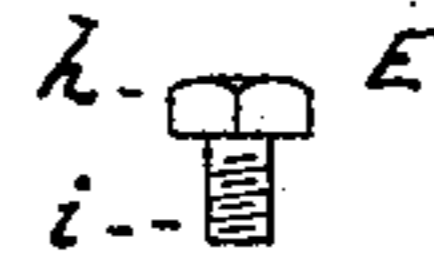


Fig. 6.

Witnesses—

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UNITED STATES PATENT OFFICE.

FRITZ CELCE, OF HOLYOKE, MASSACHUSETTS, ASSIGNOR TO THE HENRY SEYMOUR CUTLERY COMPANY, OF SAME PLACE.

SHEARS.

SPECIFICATION forming part of Letters Patent No. 355,299, dated January 4, 1887.

Application filed June 3, 1886. Serial No. 204,002. (No model.)

To all whom it may concern:

Be it known that I, FRITZ CELCE, a citizen of the United States, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Shears, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to that class of scissors shears in which the cutting-blades are held against each other by means of an adjustable spring arranged to act upon a loose bolt at the pivot-joint.

The objects of my improvements are, first, to produce a uniform and adjustable pressure between the cutting-blades at the crossing edge; second, to lessen the cost of manufacture, and, third, to avoid the unhealthy dry-grinding required in the manufacture of shears of ordinary construction.

In the accompanying drawings, Figure 1 is a side elevation of a pair of shears with my invention applied. Fig. 2 is a plan view of the same; and Figs. 3, 4, 5, and 6 are views of the various parts detached.

Similar letters refer to like parts throughout the several views.

In Figs. 1 and 2, A is the right-hand blade and B the left-hand blade. Through these blades at the pivot-joint passes the pivot-pin C, but is not rigidly connected to either blade.

The pin or bolt C is shown in detail in Figs. 3 and 4, *a* being a head, *b* a neck cut under said head *a*, *c* the portion of the bolt fitting corresponding holes in the blades A and B, and *d* a head to form a bearing for the bolt against the side of the blade B.

The screw E (shown in detail in Fig. 6) has a head, *h*, of suitable form, to be turned with a wrench or other tool, and a threaded end, *i*, fitting a corresponding threaded hole in the blade A. This screw E is for the purpose of adjusting the pressure of the spring D upon the bolt C, as will be next explained.

The spring D is bent near the center, as shown in detail in Fig. 5 at *f*. The end *e* is slotted to fit the neck *b* of the bolt C. Near the end *g* is a hole, as shown, of proper size to

admit the adjusting-screw E. As shown in Fig. 2, this spring bears upon the blade A at a point or line near the center of said spring, the end *e* presses up under the head *a* of the bolt C, tending to draw the two blades together, while the end *g* of the spring is slightly raised above the surface of the blade, but may be drawn nearer to the surface by screwing in the adjusting-screw E.

By the arrangement described, when E is screwed in, thus drawing down the end *g*, the end *e* is raised, thus increasing the pressure with which the two blades are drawn together. By changing the position of the screw E the pressure may be adjusted to any desired amount. By the elasticity of the spring D the pressure is maintained at the crossing edge of the blades even when not ground true. By reason of this spring attachment and adjustable tension, proper action is secured without the final dry-grinding to bring the blades to perfect truth that is necessary with ordinary constructions, thus saving expense and doing away with a very unhealthy process. The substitution of a loose joint pin or bolt C in place of an accurately fitted and rigidly-secured one is another material saving in the expense of manufacture.

In the bolt C the neck *b* may be slotted on two sides to receive the slot in the end of the spring as shown in Fig. 3; or it may be left round, and the slot in the spring made sufficiently large to accommodate it. The latter construction is shown in Fig. 4. With the former construction the bolt is prevented from turning, the head *a* is preserved from serious wear, and the wear is brought upon the head *d*. In the latter form, as in Fig. 4, more wear comes upon the head *a*, as the bolt is free to turn and bring different parts into contact with the spring.

I am aware that prior to my invention shears have been constructed with a spring bearing upon a pivot-pin. Patent No. 330,813 is of this class, having a non-adjustable spring bearing upon a pin rigidly secured to one of the blades. I am also aware that a spring has been used in connection with a pivot-pin passing loosely through both blades of a pair of

shears, as shown in Patent No. 102,944. I do not therefore claim the combination of a spring and pivot-pin, broadly; but

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

The combination, with a pair of shear-blades, of a pivot-pin passing loosely through both of said blades and having a head, *d*, at one end and a neck, *b*, near the other end, a lever-spring having a bend between its ends to serve

as a fulcrum bearing against one of said blades, said spring being slotted at one end to embrace said neck, and an attaching and adjusting screw passing through said spring near its other end, substantially as set forth.

FRITZ CELCE.

Witnesses:

R. H. SEYMOUR,

H. K. HAWES.

Letters Patent No. 355,299.

It is hereby certified that in Letters Patent No. 355,299, granted January 4, 1887, upon the application of Fritz Celce, of Holyoke, Massachusetts, for an improvement in "Shears," an error appears in the printed specification requiring correction, as follows: In line 7, page 2, the words "pivoted pin," should read *pivot-pin*; and that the Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 15th day of February, A. D. 1887.

[SEAL.]

D. L. HAWKINS,
Acting Secretary of the Interior.

Countersigned:

R. B. VANCE,
Acting Commissioner of Patents.