G. H. BEACH.

TENSION DEVICE FOR SCISSORS AND SHEARS.

APPLICATION FILED APR. 28, 1915.

1,148,429. Patented July 27, 1915.

Fig. 1.

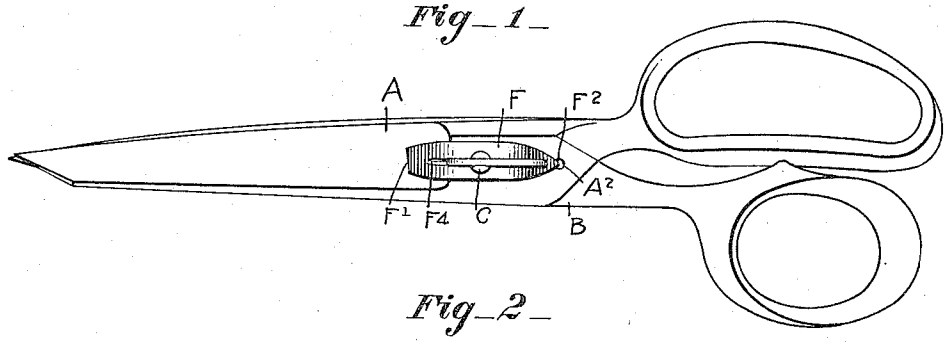


Fig. 2.

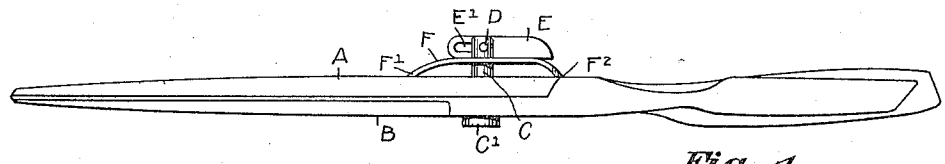


Fig. 4.

Fig. 3.

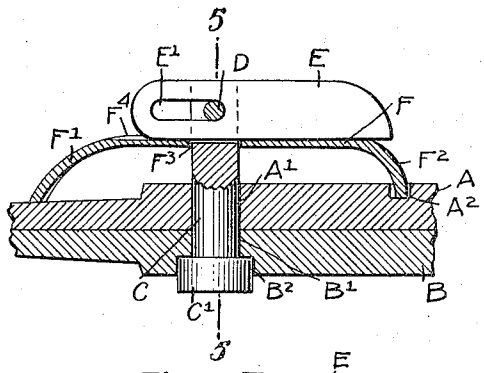


Fig. 5.

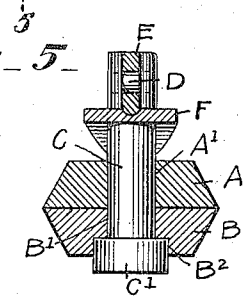
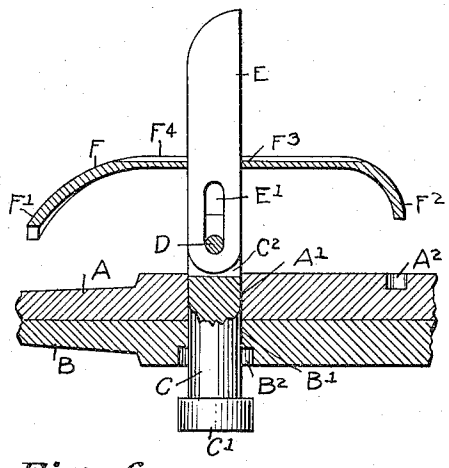
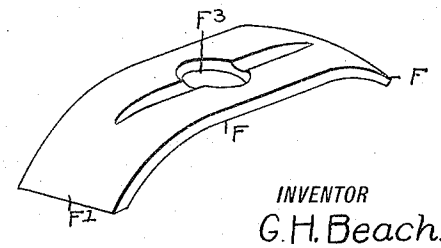


Fig. 6.





WITNESSES:

Frank C. Palmer.

Geo. J. Hoster.

INVENTOR

G. H. Beach.

BY Munn & Co.

ATTORNEY

UNITED STATES PATENT OFFICE.

GEORGE H. BEACH, OF LITCHFIELD, MINNESOTA.

TENSION DEVICE FOR SCISSORS AND SHEARS.

1,148,429. Specification of Letters Patent. Patented July 27, 1915.

Application filed April 28, 1915. Serial No. 24,444.

To all whom it may concern:

Be it known that I, GEORGE H. BEACH, a citizen of the United States, and a resident of Litchfield, in the county of Meeker and State of Minnesota, have invented a new and Improved Tension Device for Scissors and Shears, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved tension device for scissors and shears, which is simple and durable in construction, arranged to maintain a uniform tension on the blades to insure proper cutting, to allow of conveniently taking the blades apart for grinding or other purposes, and to prevent undue wear of the parts.

In order to accomplish the desired result use is made of a pivot for the blades to swing on and having an integral head at one end and a pin at the other end, a flat tension spring held on the said pivot and having angular ends bearing on the uppermost blade at opposite sides of the said pivot, and a cam lever having a slot through which extends the said pin to allow a sliding and swinging movement of the cam lever on the said pin of the pivot.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the tension device as applied to scissors; Fig. 2 is a side elevation of the same; Fig. 3 is an enlarged longitudinal central section of the same; Fig. 4 is a similar view of the same with the cam lever in position for assembling and disassembling the parts and with the spring out of engagement with the top blade; Fig. 5 is a cross section of the same on the line 5—5 of Fig. 3; and Fig. 6 is a perspective view of the spring.

The top and bottom blades A and B of the scissors or shears are provided with registering apertures A′, B′ through which extends a pivot C provided at its lower end with an integral head C′ fitting into the countersunk portion B^2 of the aperture B′. The upper end of the pivot C is in the form of a fork C^2 and on the fork members is held a pin D on which is mounted to swing and to slide a cam lever E having a slot E′ through which extends the pin D. The cam lever E extends between the members of the fork C^2 of the pin C, and the said lever E is adapted to overlie the top of a flat spring F having angular ends F′, F^2, of which the angular end F′ extends forwardly and bears on the top of the upper blade A while the rear end F^2 engages a recess A^2 formed in the top blade a distance rearward from the pivot C. By this arrangement the spring F will move bodily with the upper blade A. The spring F is provided at or near its middle with an aperture F^3 through which is adapted to pass the pivot C and the lever E, as hereinafter more fully explained. The top of the spring F is provided with a longitudinally extending guideway F^4 into which fits the bottom edge of the lever E so as to hold the latter against lateral movement and to prevent turning of the pivot C in the registering apertures A′ and B′. The lever E is of a width corresponding approximately to the diameter of the pivot C so that when the lever E is swung into vertical position then the spring F can be readily removed from the pivot C and the lever E when assembling the parts. When the several parts are assembled as shown in Figs. 1, 2, 3 and 4, then the lever E extends longitudinally in the guideway F^4 of the spring F and bears down on the same so that the ends F′, F^2 bear down onto the upper blade A thus holding the cutting edges of the blades A and B in proper relation one to the other. It will be noticed that when the lever E is in this position the inner end of its slot E′ is engaged by the pin D so that the lever E is not liable to swing accidentally out of place. When it is desired to disassemble the parts for grinding or for other purposes then a longitudinal sliding movement is given to the lever E in a rearward direction until the forward end of the slot E′ engages the pin D to allow of swinging the lever E upward into vertical alinement with the pivot C. The spring F and the blades A and B can now be readily slipped off the pivot C and the lever E. After the desired repairs have been made the parts are replaced on the pivot C and then the lever E is swung downwardly to cause its heel to bear on the top of the spring F to place the spring under tension, and then the lever E is pushed forwardly until the pin D en-

gages the rear end of the slot E'. The free end of the lever E is preferably rounded off so as to form no undesirable projections.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A tension device for scissors and shears, comprising a pivot for the blades of the scissors or shears to swing on, the pivot having an integral head at one end and a pin at the other end, a flat tension spring having a central opening for the passage of the said pin and having angular ends bearing on the uppermost blade on opposite sides of the pivot, and a cam lever having a slot through which extends the said pin to allow sliding and swinging movement of the cam lever on the said pin of the pivot.

2. A tension device for scissors and shears, comprising a pivot for the blades of the scissors or shears to swing on, the pivot having an integral head at one end and being formed at the other end, a pin held on the forked end of the said pivot, a flat tension spring held on the said pivot and having angular ends bearing on the uppermost blade on opposite sides of the pivot, the tension spring having a longitudinally extending guideway at the top, and a cam lever having a swinging and sliding movement on the said pin and adapted to engage the said guideway.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE H. BEACH.

Witnesses:
AXEL W. KRON,
HENRY A. BECKENED.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."