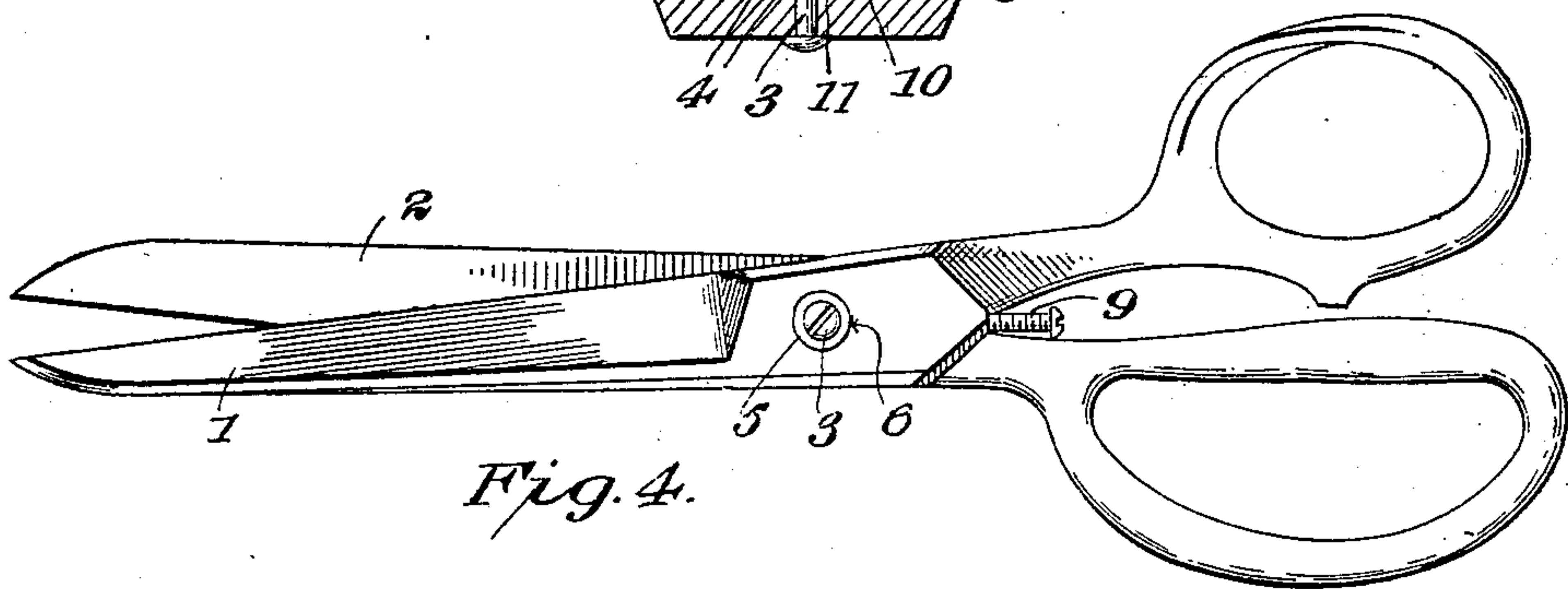
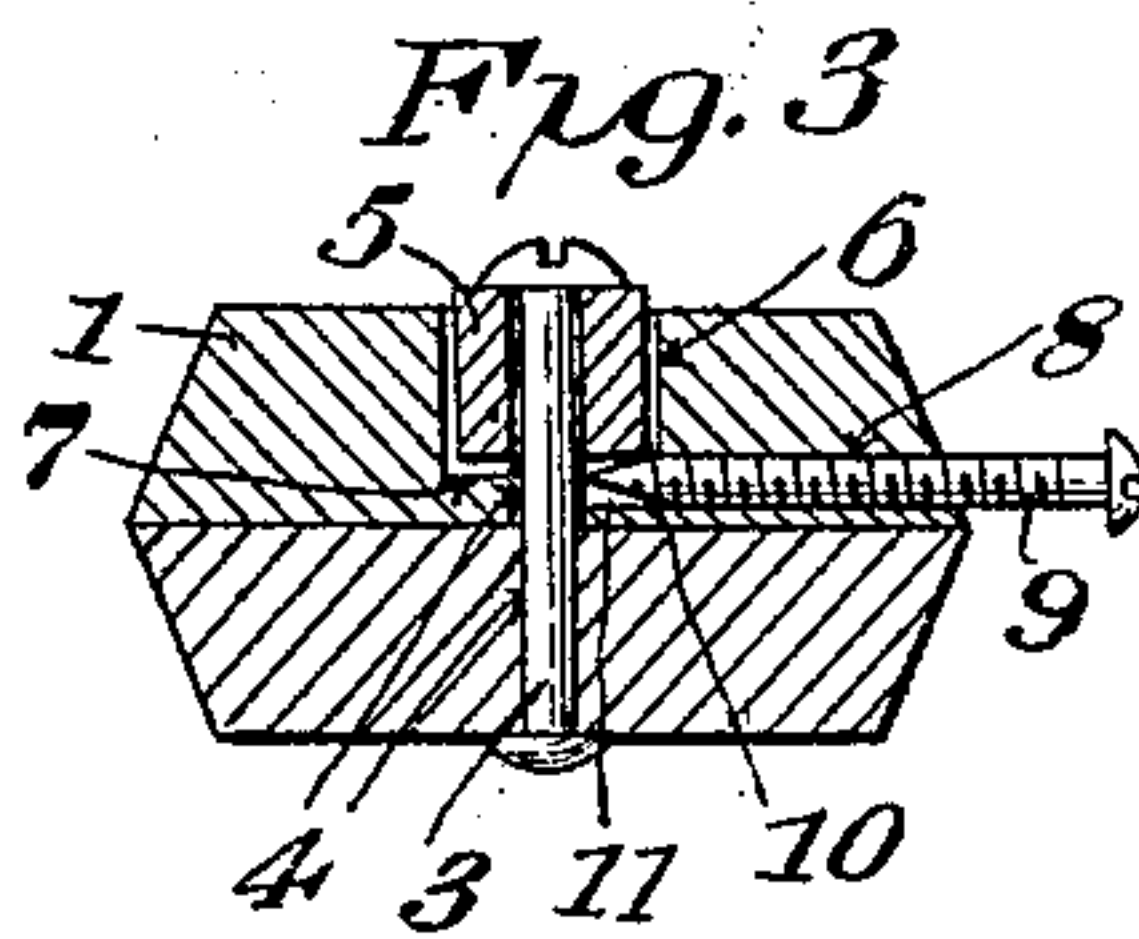
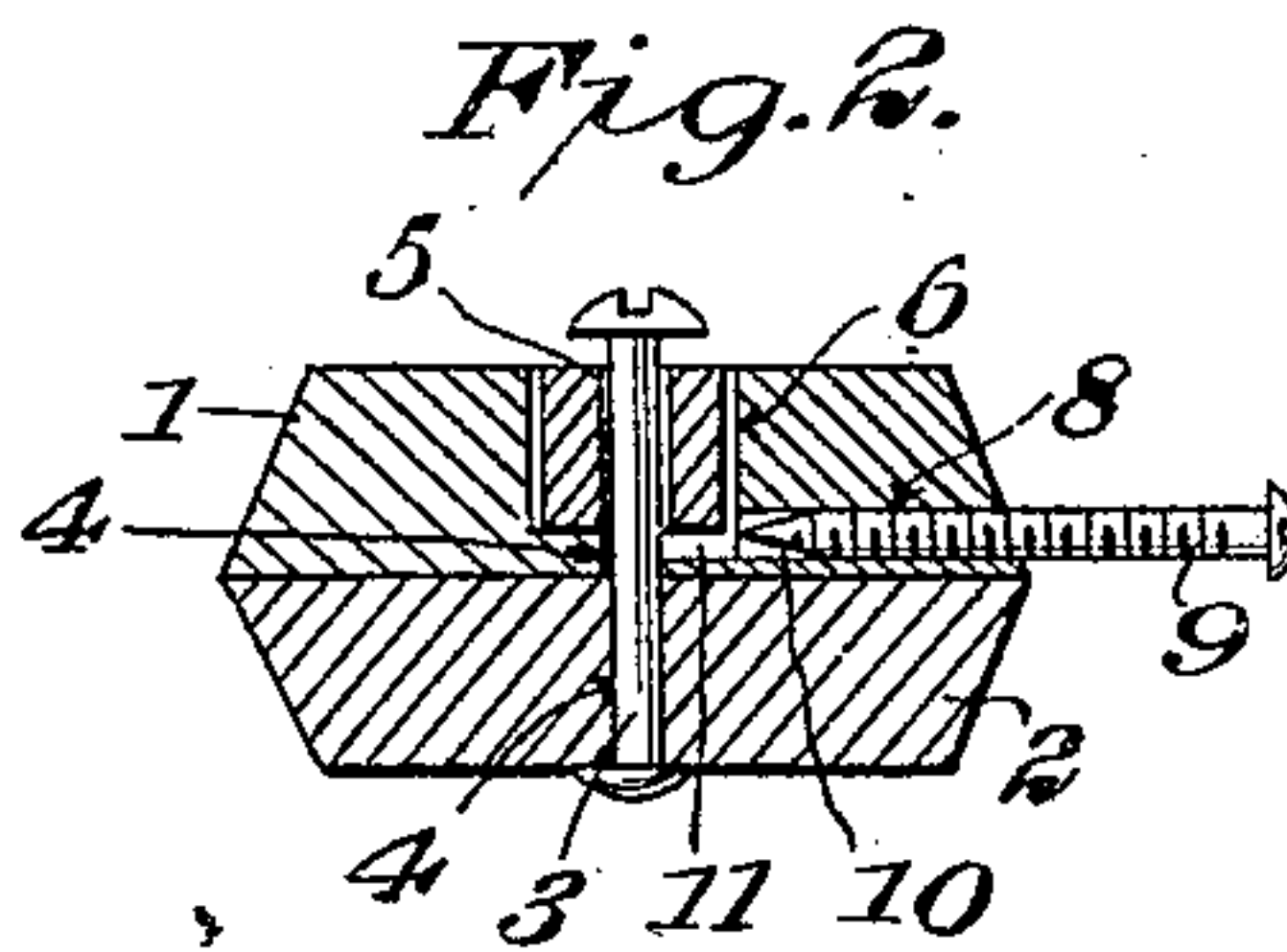
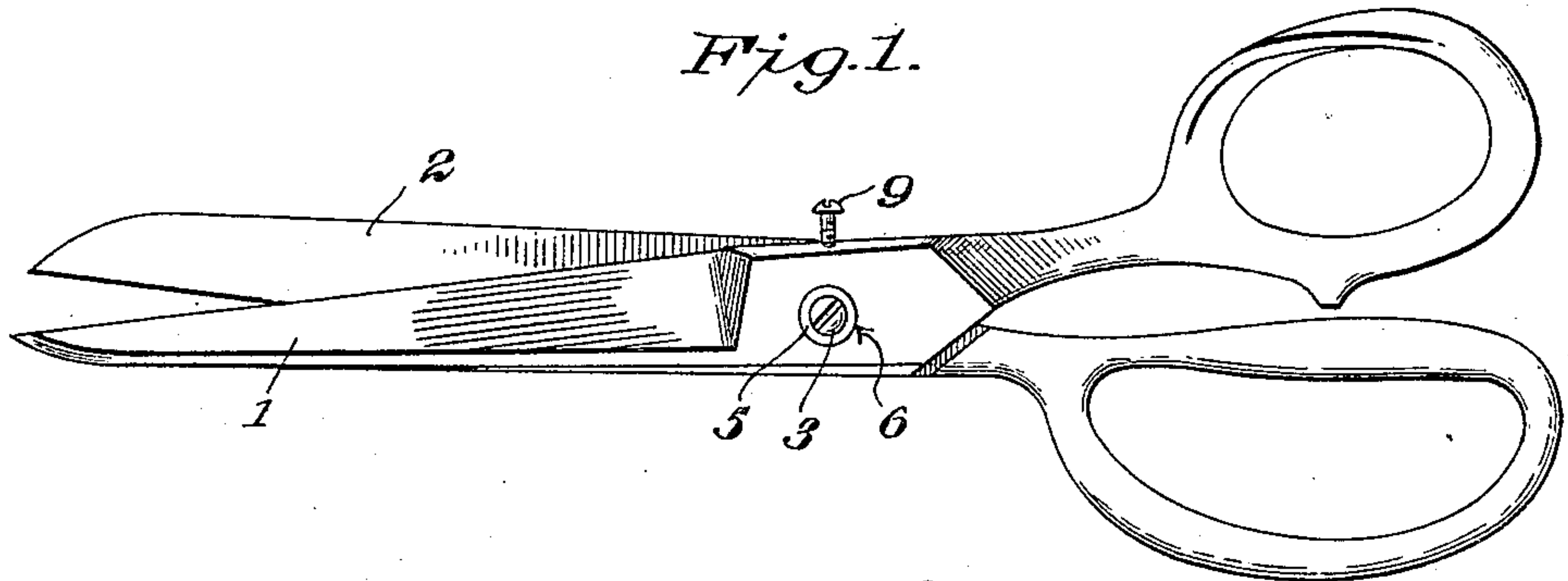


G. M. CRIDER.  
TENSION DEVICE FOR SHEARS.  
APPLICATION FILED MAY 28, 1909.

951,236.

Patented Mar. 8, 1910.



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# UNITED STATES PATENT OFFICE.

GEORGE M. CRIDER, OF MARION, KENTUCKY.

TENSION DEVICE FOR SHEARS.

951,236.

Specification of Letters Patent.

Patented Mar. 8, 1910.

Application filed May 28, 1909. Serial No. 498,889.

*To all whom it may concern:*

Be it known that I, GEORGE M. CRIDER, a citizen of the United States, residing at Marion, in the county of Crittenden and State of Kentucky, have invented certain new and useful Improvements in Tension Devices for Shears, of which the following is a specification.

This invention comprehends certain new and useful improvements in shears and like cutting instruments and relates more particularly to an improved tension device through the instrumentality of which the blades of the shears are held forcibly together, so as to cut more effectually and render the blades self-sharpening, the device being susceptible of ready adjustment and possessing certain other advantages that render it particularly attractive.

With this and other objects in view that will more fully appear as the description proceeds, the invention consists in certain constructions and arrangements of the parts that I shall hereinafter fully describe and then point out the novel features in the appended claims.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a plan view of a pair of shears embodying the improvements of my invention; Fig. 2 is a transverse section showing the screw backed off and the wedge in an inoperative position; Fig. 3 is a similar view with the wedge inserted beneath the washer; and, Fig. 4 is a plan view of a modification hereinafter specifically described.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

My improved tension device is illustrated as applied to an ordinary pair of shears consisting of the blades 1 and 2 which are of conventional form and are connected together by means of a pivot bolt 3 that is passed through registering pivot openings 4. Interposed between the head of the pivot bolt and the adjacent blade, designated 1, is a hollow cylindrical washer 5 that is accommodated in an enlarged portion 6 of the corresponding pivot opening. The

washer is adapted to rest upon an outwardly facing interior shoulder 7 provided by the enlargement 6. The blade 1 is also formed with a transverse opening 8 which opens outwardly through a side edge thereof and leads into the enlarged portion 6. This opening is interiorly threaded and designed for the reception of a screw 9, the latter having its extremity gradually tapered to constitute a wedge 10 which is arranged to be inserted beneath the washer to force the same outwardly against the head of the pivot bolt, whereby to exert tension upon the pivot bolt and increase the tension between the blades 1 and 2. Attention is particularly directed to the fact that the opening 8 is so situated so as to be bisected longitudinally by the plane of the shoulder 7, the portion of the opening disposed below the plane registering with a groove 11 formed in the shoulder. By virtue of such an arrangement it is to be noted that the point of the wedge is supported substantially in the plane of the shoulder, thus insuring the wedge assuming an operative position beneath the washer when the screw is advanced.

From the foregoing description in connection with the accompanying drawing, it will be apparent that I have provided an improved tension device which holds the blades of the shears forcibly together to render them more efficient and make them self-sharpening; which admits of the tension between the blades being expeditiously regulated by merely adjusting the screw in the blade; which is very compact and embodies to a marked degree the characteristics of simplicity and durability; and which consists of comparatively few parts that may be easily and cheaply manufactured, so as to be capable of being applied to the shears without materially increasing their cost.

It is to be understood that I do not limit myself to placing the screw at the side edge of the blade, but, if desired, may arrange the screw longitudinally, as illustrated in Fig. 4, wherein the screw enters the blade in the rear of the pivot bolt at the point where the blade is offset for the handle. In this instance the projecting head of the screw is located between the handle, so as to be entirely out of the way and be prevented from possibly catching on the material to be cut.

Having thus described the invention what is claimed as new is:



1. The combination of a cutting instrument embodying blades formed with registering pivot openings, one of which is enlarged to provide an interior shoulder, a pivot pin passed through the openings, a member encircling the pivot pin and accommodated in the enlarged portion, and means for forcing the member away from the shoulder to exert tension on the pivot pin.

2. The combination of a cutting instrument embodying blades formed with registering pivot openings, one of which has an interior shoulder, a pivot pin passed through the openings, a member encircling the pivot pin in proximity to said shoulder, and a screw working in one of the blades and provided with a terminal wedge adapted to be projected into said pivot opening between the shoulder and the member to exert tension on the pivot pin.

3. The combination with a cutting instrument embodying blades formed with registering pivot openings, and a pivot pin inserted through the openings, of a tension device embodying a washer mounted on the pivot pin and interposed between the head

thereof and the adjacent blade, one of the pivot openings being enlarged to accommodate the washer, and a wedge inserted beneath the washer to force the same outwardly and exert tension on the pivot pin.

4. The combination with a cutting instrument embodying blades formed with registering pivot openings, and a pivot pin inserted through the openings, of a tension device embodying a washer mounted on the pivot pin and interposed between the head thereof and the adjacent blade, one of the pivot openings being enlarged to accommodate the washer, the said adjacent blade being formed with a threaded opening leading into the enlarged portion, and a screw working in the threaded opening and provided at its extremity with a wedge adapted to be projected into the enlargement and inserted beneath the washer to exert tension on the pivot pin.

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

GEORGE M. CRIDER. [L. s.]

Witnesses:

H. K. WOODS,

L. J. RANDOLPH.