L. F. REGAN.

SHEARS.

APPLICATION FILED JULY 20, 1908.

911,680. Patented Feb. 9, 1909.

Fig. 1.

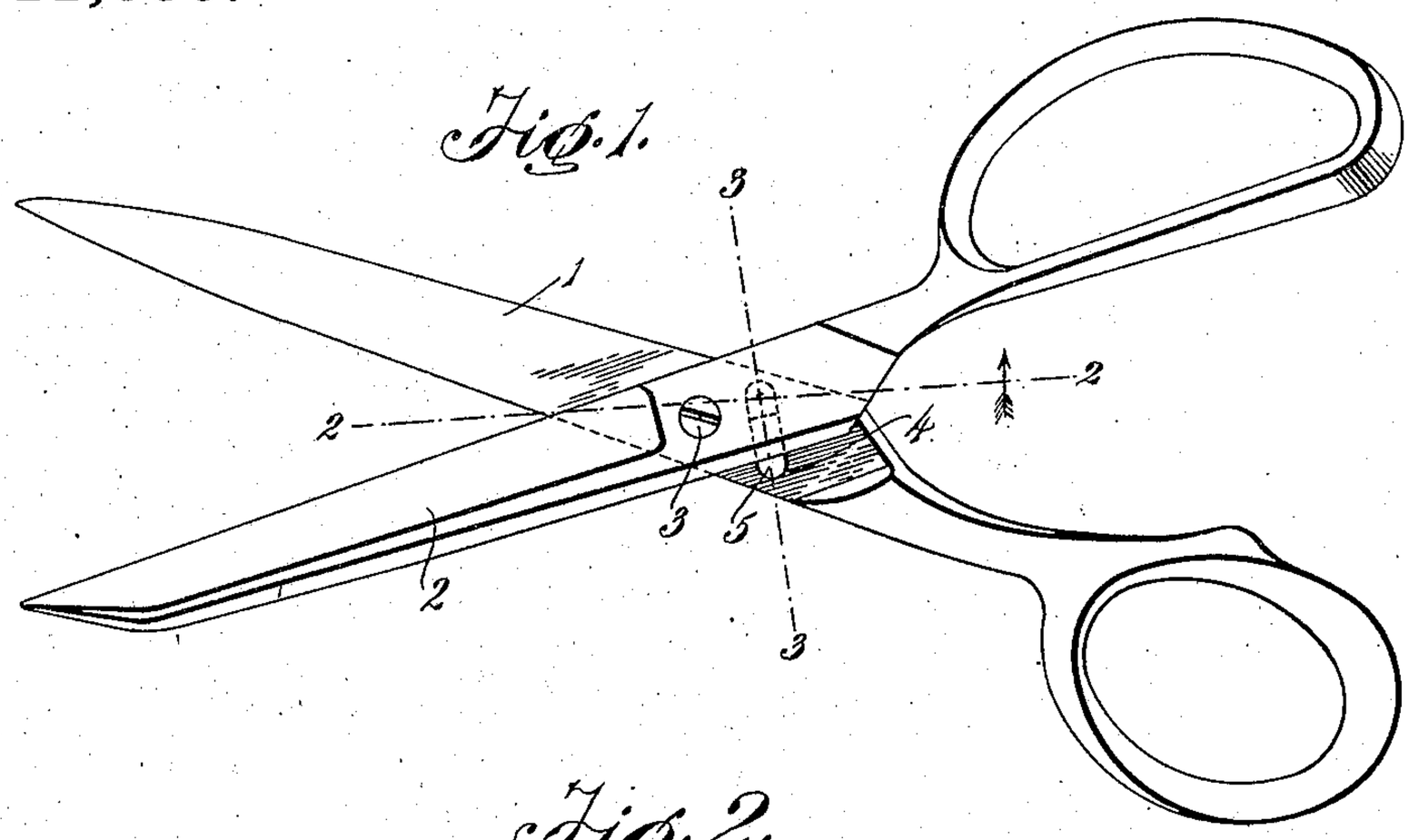


Fig. 2.

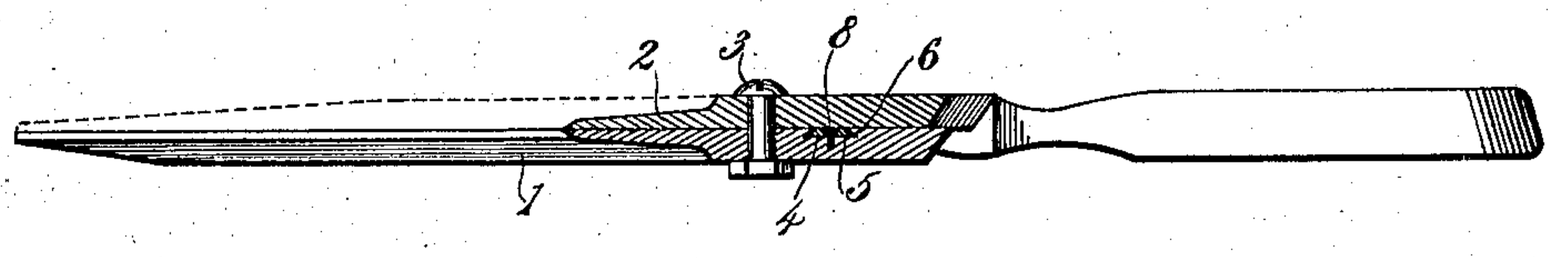


Fig. 3.

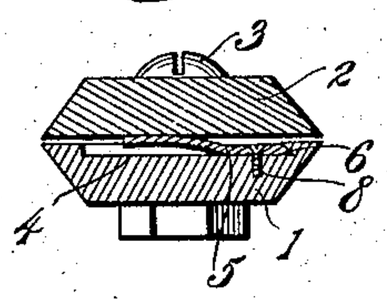


Fig. 4.

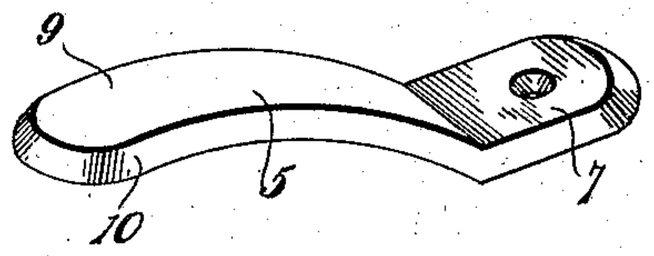
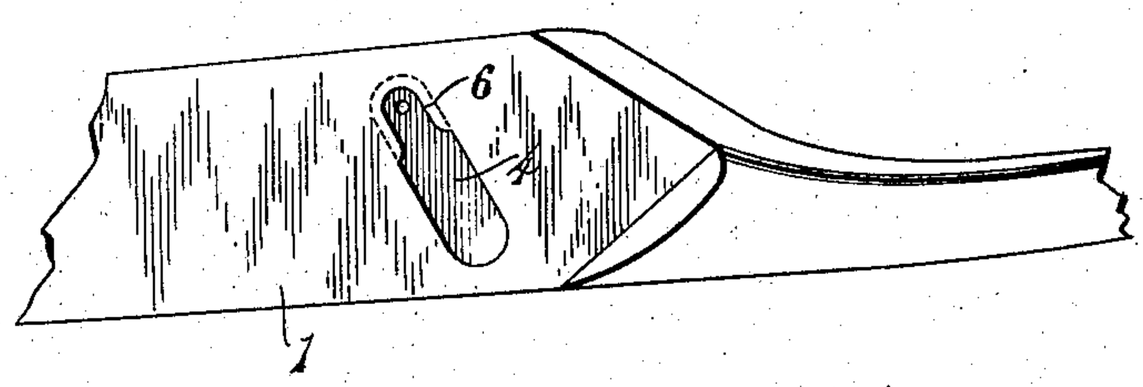


Fig. 5.



Witnesses

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SHEARS.

No. 911,680. Specification of Letters Patent. Patented Feb. 9, 1909.

Application filed July 20, 1908. Serial No. 444,467.

To all whom it may concern:

Be it known that I, LEVI F. REGAN, a citizen of the United States, residing at Walker, in the county of Cass and State of Minnesota, have invented certain new and useful Improvements in Shears, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in shears, scissors, and similar cutting implements and more particularly to a tension spring adapted to be interposed between the blades of such an implement in rear of its pivot so as to throw the cutting edges of the blades against each other throughout their entire length during the working of the blade and to take up lost motion and looseness at the pivot.

The object of the invention is to provide an automatic tension spring of this character which will be simple, strong, durable, inexpensive and highly effective in accomplishing its intended purpose.

With the above and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a pair of shears in their open position and having the invention applied thereto; Figs. 2 and 3 are sectional views taken, respectively, on the planes indicated by the lines 2—2 and 3—3 in Fig. 1; Fig. 4 is an enlarged perspective view of the spring; and Fig. 5 is a detail view of a portion of the blade having the cavity.

In the drawings 1 and 2 denote two blades of a pair of shears, scissors or similar cutting implement, said blades being united by a suitable pivot 3.

4 denotes a cavity formed in the inner face of the blade 1 in rear of the pivot 3 and 5 denotes a leaf spring secured in said cavity and adapted to bear against the inner face of the other blade 2 so as to effect a cushion or spring bearing between the cutting edges of the blades and to cause said cutting edges to contact each other throughout their entire length during the working of the blades, and also to take up lost motion or looseness at the pivot joint. The cavity 4 is substantially rectangular in shape and extends at an angle or diagonally across the blade 1, its walls at one end being undercut, as shown at 6, to receive the beveled edges of the end 7 of the spring. This end 7 is flat and of dovetail-shape in cross section so as to slide between the undercut wall 6 at one end of the cavity 4 and it is adapted to be retained in said end of the latter by a small screw or other fastening 8. The free end 9 of the spring is curved longitudinally from the portion 7 to its extremity and it is adapted to project partially out of the cavity 4 and to bear against the inner face of the blade 2. The edges of the end 9 of the spring are beveled, as shown at 10, so as to reduce friction. By arranging the cavity as shown and providing the improved spring therein, it will be seen that the latter will be out of sight and out of the way and will be securely retained in position and there will be no liability of it working loose. The spring is entirely automatic and effectively maintains the cutting edges of the blades in contact throughout their entire length during the working of the blades and effectively takes up lost motion and looseness at the pivot, thereby causing the blades to cut more effectively and dispensing with the necessity of frequently grinding the blades. The spring not only renders the scissors more effective, but renders them to some extent self sharpening and permits them to cut as readily far from as close to the pivot joint. When once the spring is applied to the shears there will be no necessity for adjustment as is the case with other devices provided to accomplish the purpose of this invention.

Having thus described the invention what is claimed is:

1. The combination with a pair of shears or similar cutting implement, one of the blades thereof having a cavity in its inner face in rear of its pivot, of a leaf spring having a flat end arranged in one end of the cavity and a curved end to bear against the inner face of the other blade and a screw passed through the flat end of the spring and into the bottom of said cavity, the head of said screw being countersunk in the flat end of the spring.

2. The combination with a pair of shears or similar cutting implement, one of the blades thereof having the cavity 4 in its inner face in rear of its pivot, said cavity having at one end the undercut walls 6 and in its bottom a screw threaded socket, of the leaf spring 5 having the flat end 7 with beveled walls to engage the undercut walls 6 of the cavity 4 in the blade, said end 7 being

also formed with an aperture to register with the threaded socket in the bottom of said cavity, the other end of said spring being curved longitudinally and adapted to bear against the inner face of the opposing blade, and a screw passed through the aperture in the flat end of the spring and into the threaded socket in the bottom of the cavity 4, substantially as and for the purposes specified.

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

LEVI F. REGAN.

Witnesses:

ARTHUR A. OLIVER,

F. B. DAVIS.