

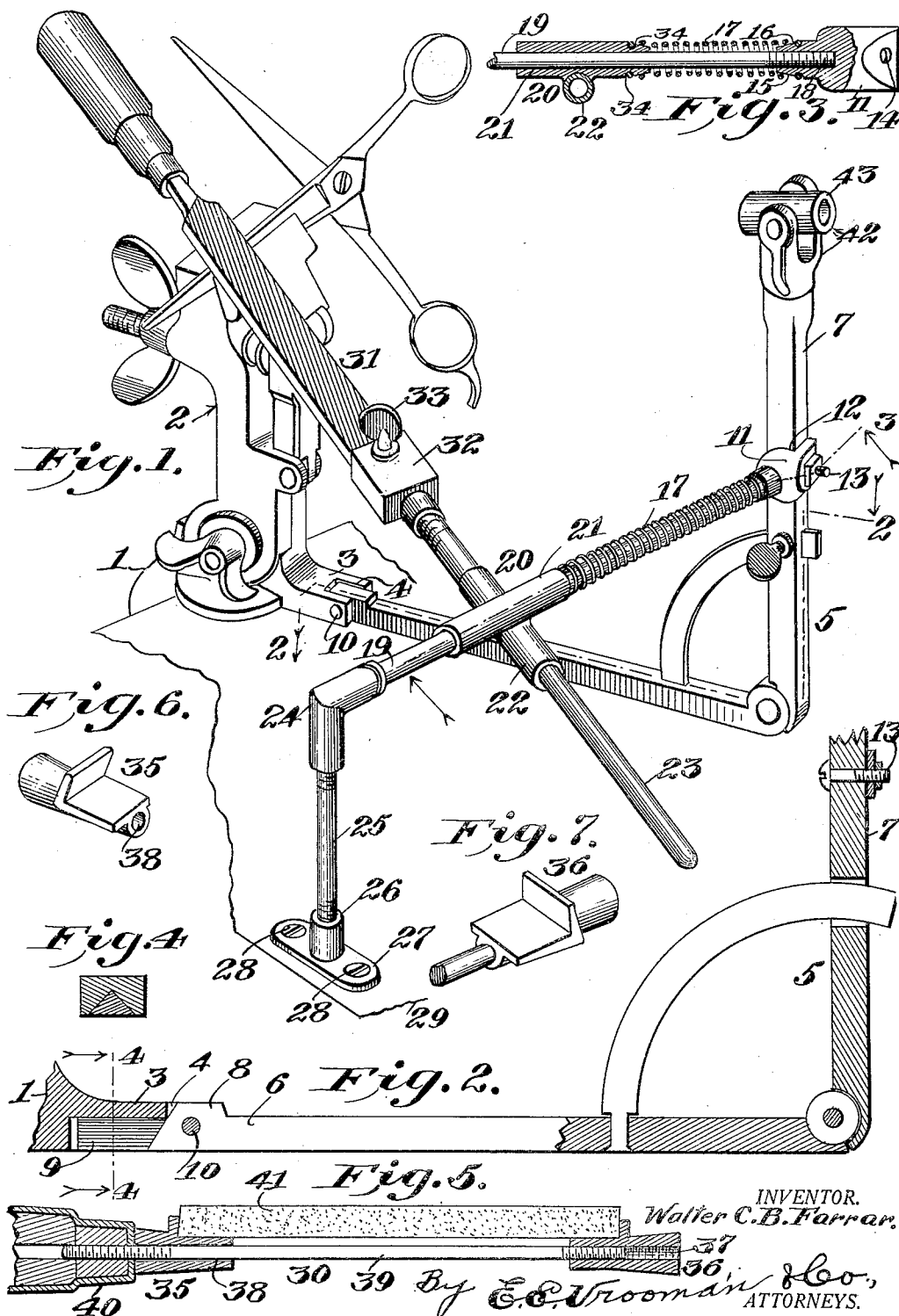
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COMBINED SHEAR SHARPENING AND CORRUGATING DEVICE

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UNITED STATES PATENT OFFICE

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COMBINED SHEAR SHARPENING AND CORRUGATING DEVICE

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This invention relates to a combined shear sharpening and corrugating device.

An object of the invention is the construction of a simple and efficient device for supporting, sharpening and corrugating shears.

Another object of the invention is the construction of a device for quickly and efficiently corrugating the cutting edges of the blades of a shear.

A still further object of the invention is the improvement of the construction of the device disclosed in my prior United States Patent No. 1,148,303.

With the foregoing and other objects in view, my invention comprises certain novel constructions, combinations and arrangements of parts as will be hereinafter fully described, illustrated in the accompanying drawing, and more particularly pointed out in the appended claims.

In the drawing:

Figure 1 is a perspective view of a device constructed in accordance with the present invention.

Figure 2 is a sectional view taken on line 2, 2, Figure 1.

Figure 3 is a sectional view taken on line 3, 3, Figure 1 and looking in the direction of the arrows.

Figure 4 is a sectional view taken on line 4, 4, Figure 2 and looking in the direction of the arrows.

Figure 5 is a longitudinal sectional view of the stone clamp.

Figure 6 is a perspective view of the outer jaw of the stone clamp.

Figure 7 is a perspective view of the inner jaw of the stone clamp.

Referring to the drawing by numerals, 1 designates the support clamp and 2 is the shear clamp common to the disclosure in my prior United States Patent No. 1,148,303, except as hereinafter specifically explained.

The support clamp is provided with the usual finger 3 that is bifurcated at 4, which is part of the improvement over my prior Patent No. 1,148,303. The foldable guide post 5 comprises a primary section 6 and an auxiliary section 7. The primary section 6

is provided with an enlarged head 8 that extends up into the bifurcation 4, with integral wedge-like portion 9 projecting horizontally therefrom. The enlarged head 8 gives greater strength to the device, by not only affording a larger body for the pivot member 10, but by extending up into the bifurcation 4, greater strength is obtained against lateral strain. This is an improvement over the disclosure in my prior Patent No. 1,148,303.

The auxiliary section 7 constitutes a support and in some of my claims, hereinafter set forth, I designate the auxiliary section 7 as a support for a part of the corrugating device. The corrugating device comprises a jaw 11 that is notched at 12 to fit against two sides of the section or support 7. A bolt 13 extends through support 7 and through the aperture 14 of jaw 11, thereby detachably securing said jaw to the support. This jaw 11 has an outwardly extending sleeve 15 on which is an annular groove 16. One end of coil spring 17 is seated or fastened in groove 16, Fig. 3. The sleeve 15 is provided with a threaded socket 18, into which is threaded the inner end of horizontal rod 19. A slidable guiding device 20 is mounted on rod 19. This guiding device 20 comprises two sleeves 21 and 22 which are preferably integrally secured together and also positioned at right angles. The sleeve 21 is slidably mounted on rod 19 and the sleeve 22 is adapted to receive reciprocal rod 23. The outer end of horizontal rod 19 is secured in the elbow 24. The upper end of vertical rod 25 is secured in the elbow 24. The lower end of rod 25 is secured in the sleeve 26 of the anchor plate 27. Screws 28 are preferably used to fasten the anchor plate 27 to a support 29.

I may attach the stone clamp 30 to the inner end of reciprocal rod 23 or I may attach the file 31 to said reciprocal rod. If the file 31 is to be attached, the outer end of the file is placed in the socket device 32 and the set screw 33 is screwed down on the file, securely fastening it in the socket device. The socket device is first screwed on the outer end of the reciprocal rod 23. This file is preferably of the "Swiss" type, with the filings running diagonally across the blade as shown in Fig. 1.

The inner end of sleeve 21 is provided with an annular groove 34 (Fig. 3) in which an end of coil spring 17 is securely fastened. This spring 17 normally exerts a pull on the guiding device 20 towards the support 7 and tends to even or make more efficient the stroke of the file over the cutting edge of the shear (Fig. 1). One complete stroke of the file over the shear blade results in the edge of the shear being corrugated substantially the distance of three times the width of the file.

The stone clamp 30 comprises the outer jaw 35 and the inner jaw 36. The inner jaw 36 has a threaded opening 37 therethrough. The outer jaw 35 has a smooth opening 38 therethrough. A rod 39 is threaded at one end into threaded opening 37 and its other end extends through opening 38 and is threaded into the handle 40. A stone 41 is placed between the jaws 35 and 36 (Fig. 5), and as outer jaw 35 slides freely on rod 39, when the handle 40 is screwed inwardly upon rod 39, the jaws 35 and 36 will be caused to tightly clamp the ends of the stone, holding it securely in place. Then the inner jaw 36 is placed against the threaded end of reciprocating rod 23 and said rod is screwed into the threaded opening 37. Then the operator, grasping handle 40, can reciprocate or draw stone 41 across the blade of the shear for sharpening the same.

Therefore, it will be seen that I have provided two different types of sharpening devices to be attached to the inner end of the reciprocating rod 23, to wit: the file unit and the stone unit. Therefore, in the claims hereinafter appended, I shall broadly designate these different devices by "sharpening means" carried by the reciprocating rod.

On the upper end of the auxiliary section or support 7, I mount a rotatable yoke 42 in which is pivotally supported a sleeve 43 (Fig. 1). Therefore, it will be seen that rod 23 can be placed in sleeve 43 and reciprocated with respect to the blade or blades of the shear, whereby sharpening means can be used on the rod 23 in connection with the pivotal support constituted by yoke 42 and sleeve 43.

By reason of the peculiar structure of jaw 11, when it is clamped by bolt 13 to support 7 an admirable support is provided for one end of the support, constituted by rods 19 and 25; this support, broadly speaking, carries the spring-attached guiding device, through which the reciprocal rod operates.

While I have described the preferred embodiment of my invention and illustrated the same in the accompanying drawing, certain minor changes or alterations may appear to one skilled in the art to which this invention relates during the extensive manufacture of the same, and I, therefore, reserve the right to make such changes or alterations as shall fairly fall within the scope of the appended claims.

What I claim is:

1. In a device of the class described, the combination with a support, of a clamp attached to said support, a rod attached to said clamp, a guiding device slidably mounted on said rod, a spring around said rod and having one end fastened to said clamp and its other end fastened to said guiding device, and sharpening means slidably mounted upon said guiding device.

2. In a device of the class described, the combination with a support, of a notched clamp against said support with the support in the notch thereof, means extending through the support and the notched portion of the clamp detachably securing the same together, said clamp provided with an outwardly extending sleeve having an annular groove, said sleeve provided with a threaded socket, a rod threaded into said socket, a guiding device comprising a sleeve on said rod and said sleeve provided with an annular groove, a coil spring around said rod and having one end seated in the annular groove of the sleeve of said jaw and its other end seated in the annular groove of the sleeve of the guiding device, and sharpening means movably engaging said guiding device.

3. In a device of the class described, the combination with a support, of a folding guide post 5 provided with an auxiliary section 7 on said support, rod supporting means spaced from said guide post and resting upon said support, a rod supported at one end upon said rod supporting means, means attaching the other end of said rod to said auxiliary section of the guide post, a guiding device slidably mounted upon said rod, and a reciprocable rod mounted on said guiding device.

In testimony whereof I hereunto affix my signature.

WALTER C. B. FARRAR.