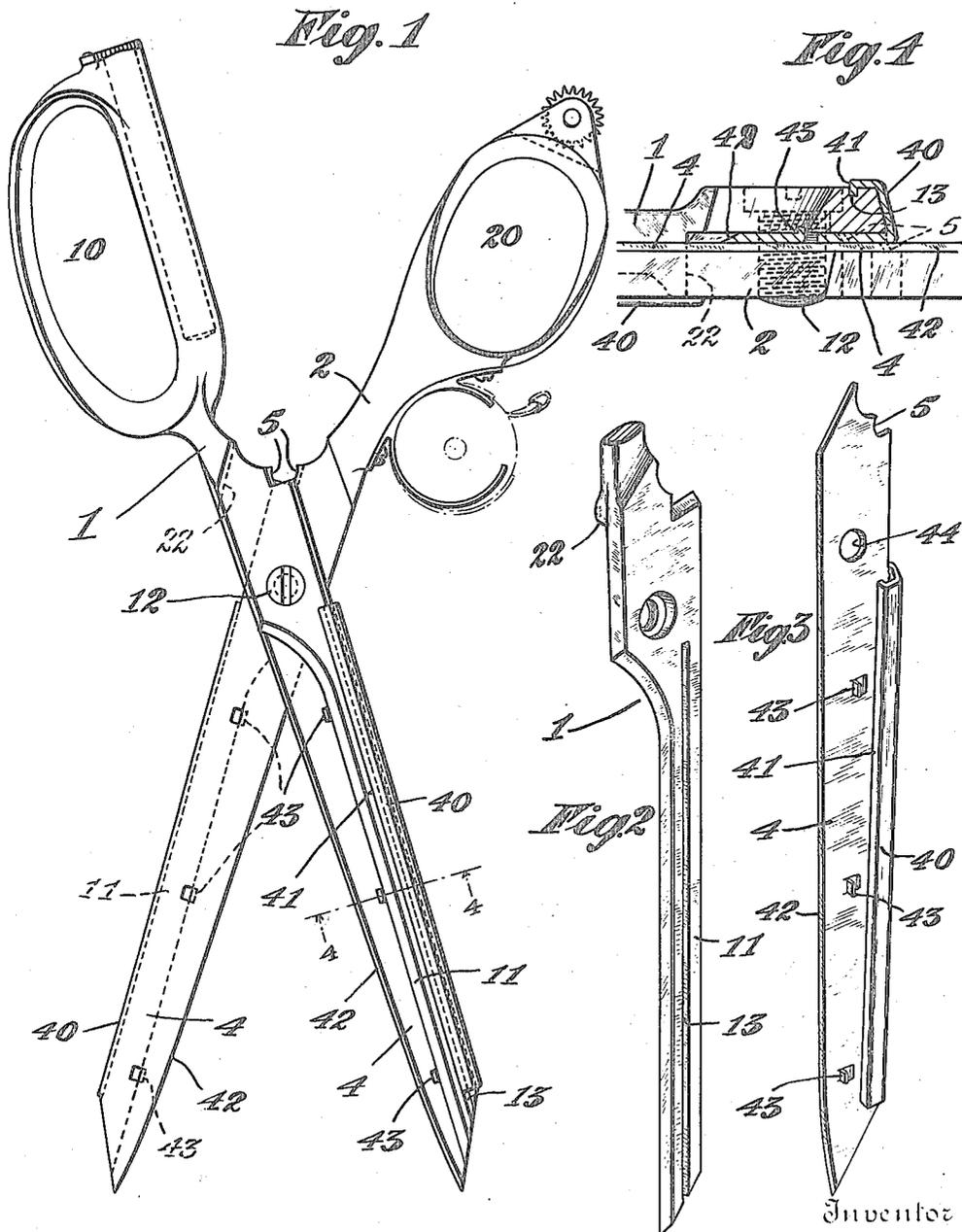


T. K. PIGGOTT.
 SHEARS WITH DETACHABLE CUTTING BLADES.
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Patented Dec. 12, 1916.



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SHEARS WITH DETACHABLE CUTTING-BLADES.

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To all whom it may concern:

Be it known that I, THOMAS K. PIGGOTT, a citizen of the United States, and resident of the city of Seattle, county of King, State of Washington, have invented certain new and useful Improvements in Shears with Detachable Cutting-Blades, of which the following is a specification.

My invention relates to shears, and consists of a novel construction wherein the shears are provided with detachable and renewable blades, whereby the blades may be made of a high quality of material and removed for sharpening or for replacement, and whereby the quantity of high quality steel required is reduced to a minimum.

The object of my invention is to provide a construction whereby the cutting members may be made of thin sheet steel of high quality, which cutting members are removable as above stated.

My invention comprises the novel features which will be hereinafter set forth and then particularly defined by the claims.

In the accompanying drawings I have shown my invention in the form of construction which is now most preferred by me.

Figure 1 is a side view of a pair of shears made in accordance with my invention, the same being shown in a partly open position. Fig. 2 is a perspective view of one of the blade frame members. Fig. 3 is a corresponding perspective of one of the thin steel blades which constitute the cutting elements. Fig. 4 is a section on the line 4-4 of Fig. 1.

The frame of the shears is composed of two members, 1 and 2, which in the main are like in construction, each consisting of hand-grip members 10 and 20 respectively and blade members 11, 11, these being pivoted by the usual pin 12.

The hand grip members 10, 20 and the part of the frame at that side of the pivot may be of any suitable construction. These need be made special in construction only as is hereinafter stated. Each of the arms 11 is provided with a groove 13 extending lengthwise thereof in one side face, which side face is the one which is outermost when the shears are closed. Adjacent the hole which receives the pivot pin 12 each blade is recessed for the reception of the corresponding portion of the plate, which forms the cutting member.

The cutting members, one of which is shown in perspective in Fig. 3, consists of a thin plate of sheet metal having a section 4, which forms the face of the blade of the shears which is inward or faces the companion blade. This extends along the corresponding face of the arm 11 and at the back edge thereof is bent to form a channel which closely embraces the back edge of the frame bar or arm 11. The plate is then bent backward or toward the cutting edge 42 to form a slight flange 41 which enters the recess 13 of the frame bar 11. The plate 4 is put in place upon the arm 11 by sliding the same lengthwise thereof. The main section 4 of this cutting member may be provided with lugs 43, which are turned upward so as to engage the inner edge of the arm 11 thereby assisting to sustain the strain produced by the cutting action.

The inner end of the flat section 4 of the cutting member extends beyond the pivot of the shears, and is provided with a hole 44 for the reception of the pivot bolt 12. By this expedient the parts are held against removal as long as the pivot bolt or pin 12 is in place. The inner end of each plate 4 is provided with a notch 5, which notches are so disposed that when the shears are open, an opening is provided as shown in Fig. 1, into which may be inserted any small object which it is desired to cut, as for instance a wire. This provides a means for cutting such objects outside of the ordinary cutting edges of the shears, and placed at a point that the leverage conditions are favorable. The opposite edges of the plates 4 are also well supported by the ledges 22 of the frame, so as to resist the strain.

It is obvious that with such a type of construction the cutting element may be made of thin sheet steel of a high degree of temper, while the frame may be made of parts which are strong and not liable to be broken. The main frame would be cheap in construction, and it would be possible to remove the cutting blades for sharpening, and to substitute therefor another set at any time desired. This makes it possible to keep the shears in good repair.

The cutting elements may also be made of a much higher grade of material than it is possible to put into shears of ordinary construction.

What I claim as my invention is:

1. A shears comprising pivoted frame members, each having a blade-carrying bar, cutting members bent to embrace the back 5 of the blade-carrying bars and terminating at this edge in an inwardly extending flange, and the blade-carrying bars having a slot to receive said flange.

2. A shears comprising pivoted frame 10 members, each having a blade carrying bar,

cutting members bent to embrace the back of the blade carrying bars and terminating at this edge in an inwardly extending flange, the blade carrying bars having a slot receiving said flange and the blades having lugs 15 engaging the front edge of the blade carrying bars.

Signed at Seattle, Washington, this 3rd day of February 1916.

THOMAS K. PIGGOTT.