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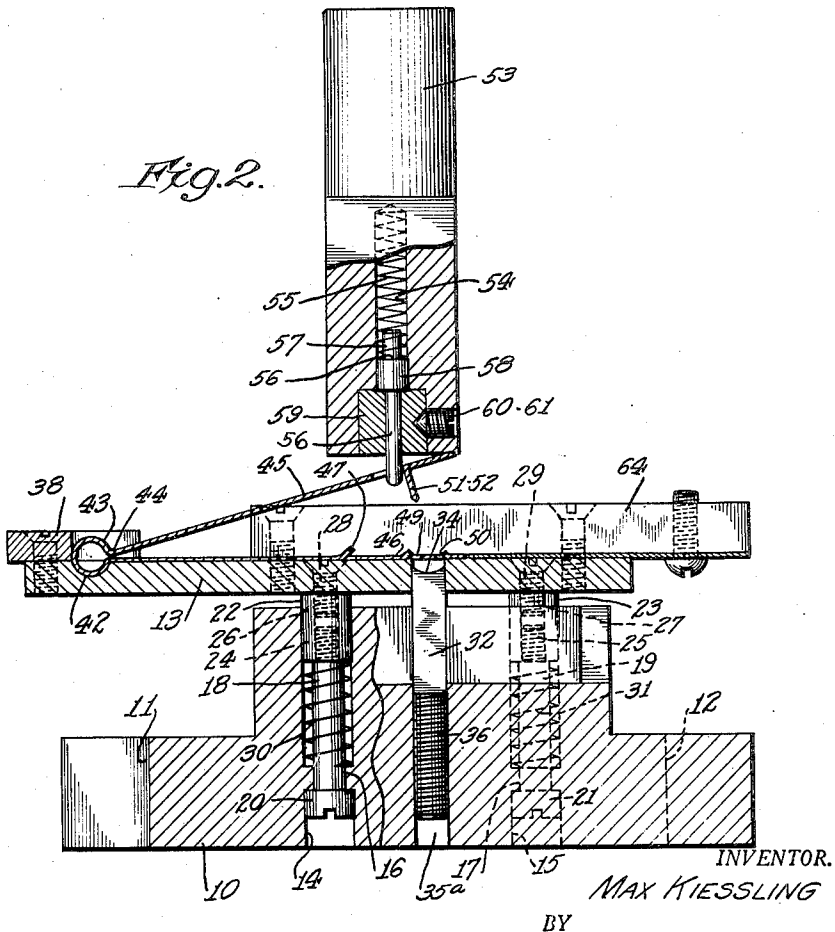
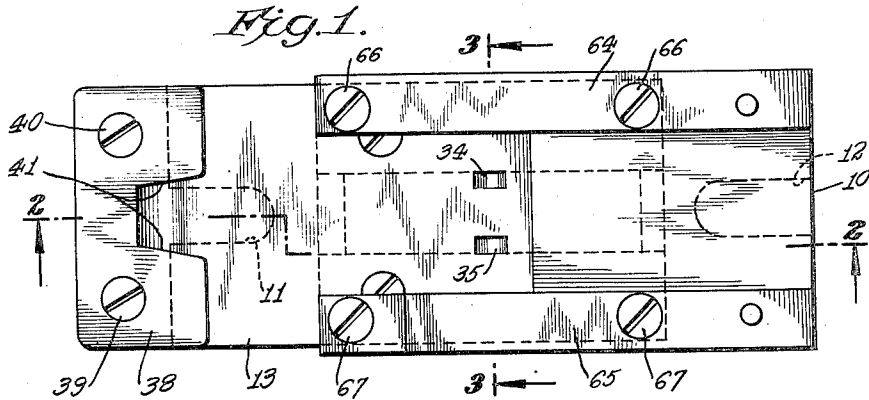
M. KIESSLING

2,495,009

TOOL FOR ATTACHING TANGS TO BELTS

Filed March 13, 1944

2 Sheets-Sheet 1



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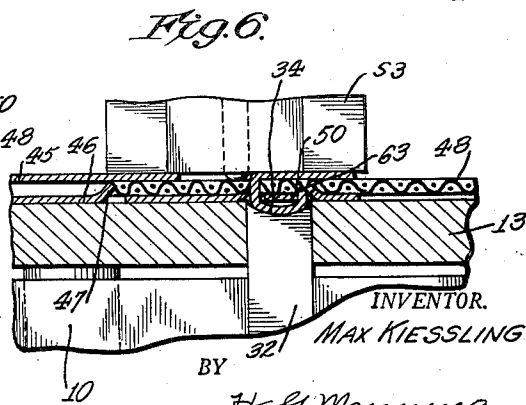
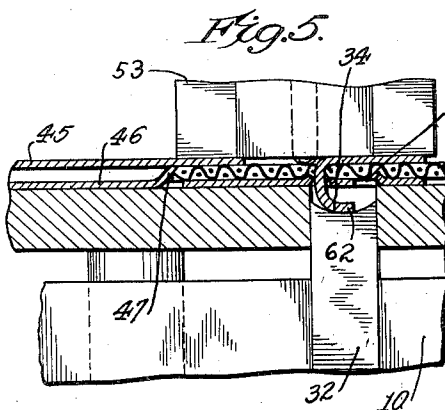
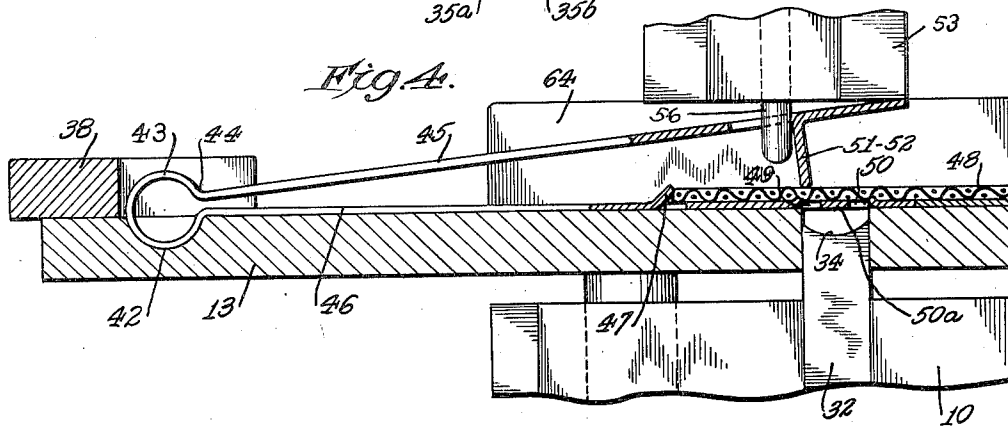
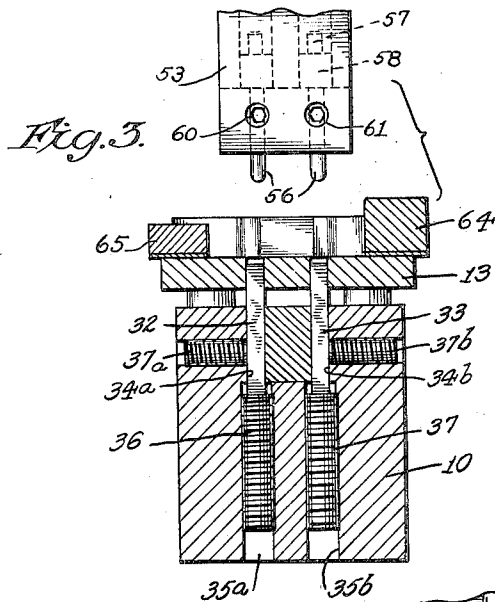
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2,495,009

TOOL FOR ATTACHING
TANGS TO BELTS

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2 Claims. (Cl. 153—1)

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This invention relates to cartridge belts for machine guns, and more particularly to a tool for attaching tapered V-shaped metal end tangs employed to facilitate the insertion of said belts into a machine gun.

One object of the present invention is to provide a tool of the above nature which is adapted to force a pair of prongs projecting downwardly from the upper leg of the V-shaped tang through the cartridge belt, and then to bend said prongs rearwardly and upwardly so that they will pass around a neck in the lower leg of said tang and penetrate the belt a second time, thereby producing a very strong permanent connection between the tang and the belt without the use of staples or rivets.

A further object is to provide a tool of the above nature in which the bending of the tang prongs is accomplished by forcing said prongs against curved anvils mounted in the die bed.

A further object of the present invention is to provide a tool of the above nature in which the lower leg of the V-shaped tang which initially supports the belt is resiliently mounted on a spring-cushioned shelf supported above the die bed.

A further object is to provide a tool of the above nature which will be simple in construction, inexpensive to manufacture, easy to operate, compact, ornamental in appearance, and very efficient and durable in use.

With these and other objects in view, there has been illustrated on the accompanying drawings one form in which the invention may conveniently be embodied in practice.

In the drawings,

Fig. 1 represents a top plan view of the cushioned shelf for supporting the machine gun belt tang.

Fig. 2 is a side sectional view of the same taken along the line 2—2 of Fig. 1, and showing the punch, the shelf, the die bed, and an anvil extending into said shelf, prior to the insertion of the belt between the legs of the belt tang.

Fig. 3 is a transverse sectional view of the same, taken along the line 3—3 of Fig. 1.

Fig. 4 is an enlarged longitudinal sectional view showing the punch, the shelf, and an anvil in their relative operating positions just prior to the first step of forcing the prongs of the belt tang into the belt webbing.

Fig. 5 is a similar view of the same after the prongs have been forced downwardly by the punch through the belt into engagement with the curved recesses in the anvils, and have been curled rearwardly thereby below the belt.

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Fig. 6 is a view similar to Figs. 4 and 5, showing the parts as they appear after the punch has depressed the shelf fully against the die bed, and has caused the prongs to be bent upwardly and passed part way through the belt into its final position.

Referring now to the drawings in which like reference numerals denote corresponding parts throughout the several views, the numeral 10 indicates a die bed having a pair of aligned slots 11, 12 at its opposite ends for permitting said die bed to be attached to a supporting plate (not shown) located therebeneath.

The numeral 13 indicates a rectangular vertically movable cushioned shelf located above the die bed 10 and having two pairs of vertical bores 14, 15 passing entirely therethrough, said bores having reduced neck sections 16, 17 for fitting around and guiding two pairs of bolts 18, 19 which are mounted to slide vertically within the bores 14, 15. The bolts 18, 19 are provided at their lower ends with flat fillister heads 20, 21, which are normally held against the shoulders of the lower ends of the neck sections 16, 17 by means of four coiled compression springs 30, 31, the bottoms of which engage the tops of the neck sections 16, 17, and the upper ends of which engage a pair of internally threaded bushings 22, 23, which are slidably fitted into the upper ends of the bores 14, 15.

The bushings 22, 23 are adapted to receive the threaded ends 24, 25 of the bolts 18, 19 and also the lower ends of a pair of machine screws 26, 27 passing downwardly through the shelf 13, said screws 26, 27 being seated in apertures 28, 29 formed in said shelf 13.

By means of this construction, it will be seen that when the shelf 13 is pushed downwardly by means of the punch 53 to be hereinafter described, it will be cushioned by the springs 30, 31 and will be limited in its downward movement by its engagement with the top of the die bed 10.

As fully disclosed in my copending application, Serial Number 475,855, filed February 15, 1943, patented October 17, 1944, No. 2,360,501, the V-shaped belt tang 44 to be attached to the end of the cartridge belt 48 is provided with initially diverging legs 45, 46—the upper leg 45 having a pair of struck-out prongs 51, 52 depending therefrom.

In order to cause the prongs 51, 52 (which preferably have pointed V-shaped extremities) to be bent rearwardly and upwardly after being forced through the cartridge belt 48, provision is made of a pair of rectangular anvils 32, 33 projecting

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upwardly from the die bed 10 and rigidly mounted thereon. The anvils 32, 33 are provided with concave cylindrical upper recesses 34, 35, and are held rigidly in adjusted position within vertical apertures 34a, 34b by means of a pair of vertical screw plugs 36, 37 screwed into tapped apertures 35a, 35b located below said anvils. The anvils 32, 33 are also engaged by a pair of horizontal set screws 37a, 37b located in tapped horizontal apertures formed in opposite sides of the die bed 10.

In order to position the narrow looped point 43 of the belt tang 44 during the operation of attaching said tang to the belt 48, provision is made of a U-shaped end plate 38 which is attached to the forward end of the shelf 13 by means of a pair of machine screws 39, 40.

The end plate 38 is provided with a tapered slot 41, below which the shelf 13 has a semi-circular transverse groove 42 for receiving the looped end 43 of the belt tang 44. The lower leg 46 of the belt tang 44 is provided with an upstanding stop lug 47 which is slightly inclined rearwardly so as to engage the end of the belt 48 and limit the forward movement thereof during insertion. The lower leg 46 of the belt tang 44 is provided with two pairs of longitudinally spaced rectangular apertures 49, 49 and 50, 50 having partitions or neck 50a located therebetween. The apertures 49, 49 are in vertical alignment with, and are adapted to permit the passage of the pair of elongated pointed prongs 51, 52 of the upper leg 45 when said leg 45 is forced downwardly, as clearly shown in Fig. 4.

The punch 53 is provided with a pair of vertical sockets 54, within which are received a pair of coiled compression springs 55, which press downwardly upon a pair of slidable pins 56, the projections of which are somewhat shorter than the prongs 51, 52 and have reduced upper ends 57 and enlarged intermediate sections 58 fitted within the recesses 54. The lower ends of the pins 56 are rounded and engage the prongs 51, 52 of the upper tang leg 45 for guiding said prongs while they are penetrating the webbing belt 48 during the downward movement of the punch 53.

The bottom of the punch 53 is provided with a rectangular central block 59 secured in a rectangular recess within said punch by means of a pair of set screws 60, 61.

Operation.

In the operation of the invention, when the punch 53 is pushed downwardly, the prongs 51, 52 will be caused to penetrate the webbing belt 48, and will then pass down through the apertures 49 in the bottom leg 46 of the tang. The prongs 51, 52 will then strike the curved top recesses 34, 35 of the anvils 32, 33, and will be bent rearwardly as clearly shown by the numeral 62 in Fig. 5.

As shown in Fig. 6, the prongs 51, 52 will then be curled upwardly and caused to pass through the rear apertures 50 of the lower leg 46 of the tang 44, and then to penetrate about one-half way through the webbing belt 48 as indicated by the numeral 63.

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In order to centralize the tang 44 on the shelf 13 during the operation of the tool, provision is made of a pair of side guide bars, 64, 65, the guide bar 64 being relatively higher than the guide bar 65 to permit the tang and webbing to be easily inserted into position from the opposite side of the shelf. The guide bars 64 and 65 are adapted to be held detachably in position upon the shelf 13 by means of machine screws 66, 67.

While there has been disclosed in this specification one form in which the invention may be embodied, it is to be understood that this form is shown for the purpose of illustration only and that the invention is not to be limited to the specific disclosure, but may be modified and embodied in various other forms without departing from its spirit. In short, the invention includes all the modifications and embodiments coming within the scope of the following claims.

Having thus fully described the invention, what is claimed as new, and for which it is desired to secure Letters Patent is:

1. In a machine for attaching upon a sheet of material a V-shaped clip having on its upper leg a depending prong and on its lower leg a pair of front and rear longitudinally spaced apertures, a fixed anvil having a concave upper face, said anvil projecting upwardly through an opening in the bed of said machine, a punch located above said upper leg, said punch having a plunger yieldingly mounted at the lower end of said punch, said plunger being offset forwardly from the forward edge of the anvil to engage and prevent forward movement of said clip during the attaching operation, means to force said punch downwardly against said upper leg to cause said prong to penetrate said sheet, pass through said front aperture, and be bent rearwardly and upwardly by said anvil, pass through said rear aperture, and finally to penetrate said sheet from the bottom side thereof.

2. The invention as defined by claim 1, in which the bed of said machine is provided with a guide channel, the sides of which are of unequal heights to facilitate the lateral insertion of said clip into operating position.

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