May 21, 1929. W. P. MARTINET 1,714,387

PLIERS

Filed Jan. 17, 1928

Fig. 1.

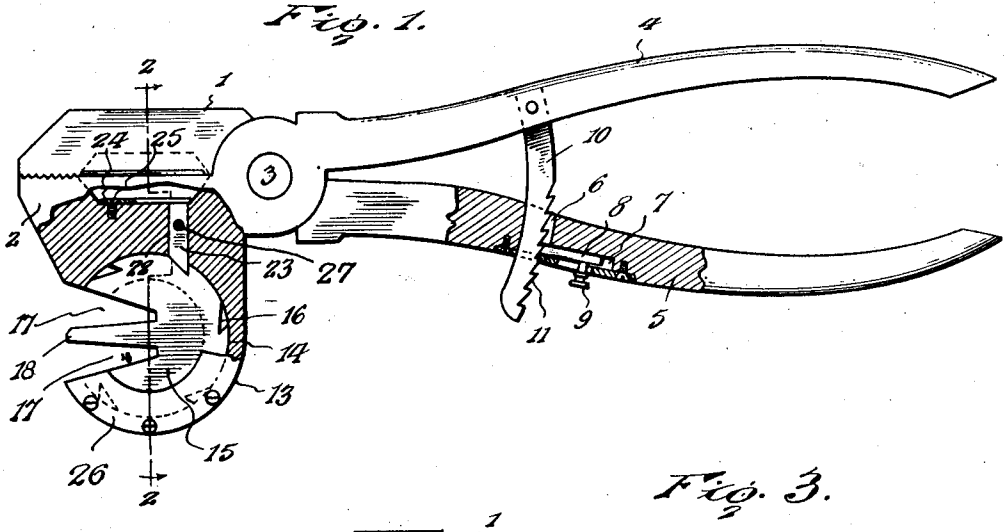


Fig. 3.

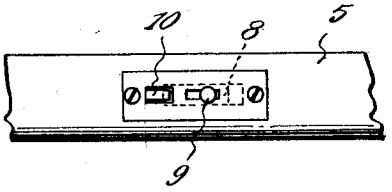


Fig. 2.

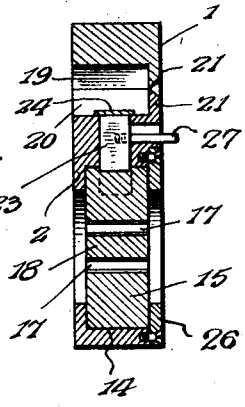


Fig. 4.

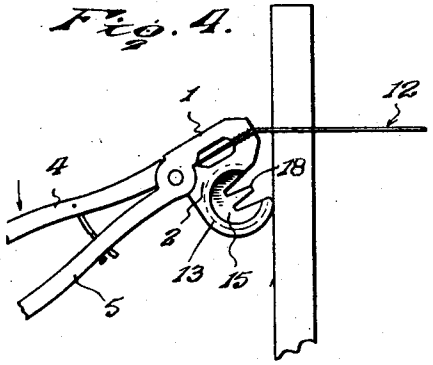
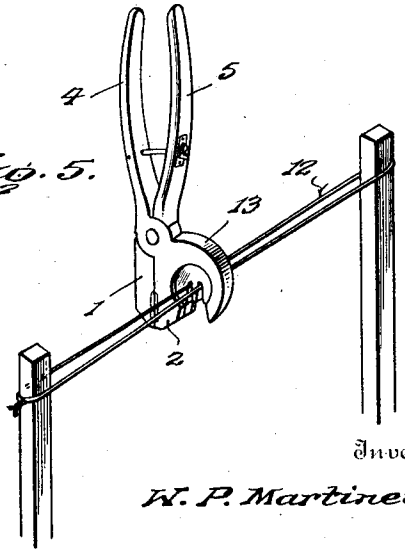


Fig. 5.



Inventor

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By Lacey & Lacey, Attorneys

Patented May 21, 1929. 1,714,387

UNITED STATES PATENT OFFICE.

WENDELL P. MARTINET, OF SAN FRANCISCO, CALIFORNIA.

PLIERS.

Application filed January 17, 1928. Serial No. 247,422.

The present invention is directed to improvements in pliers.

The primary object of the invention is to provide a device of this character so constructed that wire used in connection with concrete forms can be effectively tightened and twisted.

Another object of the invention is to provide a device of this character constructed in such manner that the jaws thereof can be locked into engagement with the wire in order that the grip can be changed upon the device without the likelihood of the same falling.

With these and other objects in view, this invention resides in the novel features of construction, formation, combination and arrangement of parts to be hereinafter more fully described, claimed and illustrated in the accompanying drawing, in which,—

Figure 1 is a side elevation of the device, partly in section.

Figure 2 is a sectional view on line 2—2 of Figure 1.

Figure 3 is a fragmentary plan view of one of the handles.

Figure 4 is a side elevation of the device showing it used for stretching the form wire.

Figure 5 is a perspective view of the device showing it in position for twisting the form wire.

Referring to the drawing, 1 and 2 designate jaws pivotally connected by a pin 3, said jaws having handles 4 and 5 formed integral therewith, the handle 5 having an opening 6 formed therein which communicates with a recess 7 in which is slidable a latch 8 having an actuating knob 9, said latch being retained in the recess in any suitable manner.

Having one end fixed to the handle 4 is a segmental bar 10 having teeth 11 carried thereby for cooperation with the latch 8 to obviously hold the jaws 1 and 2 locked in engagement with the wire 12, as shown in Figure 4.

The jaw 2 carries a lateral head 13 in which is formed a socket 14 for rotatively receiving the disk 15, said disk being provided with peripheral notches 16, said disk being formed with radial slots 17 and a resultant wire engaging finger 18. The jaws 1 and 2, as customary, are provided with recesses 19—19 and wire cutting blades 21—21.

Connecting the socket 14 and recess 20 is a passage 22 in which is mounted a pawl 23 which coacts with the disk. In order to cause the pawl to positively engage the notches 16 a leaf spring 24 is employed and has one end fixed by a screw 25 to the base of the recess 20, the free end thereof bearing upon the adjacent end of the pawl 23. The disk 15 may be retained in the socket by the arcuate plate 26, or in any other approved manner.

Referring to Figure 4, the jaws are shown gripping the tie wire which can be effectively stretched upon placing the head 13 against the studding. After the wire has been properly tightened the tongue 18 is placed between the stretches thereof and the handles rocked backwardly and forwardly, thus stepping the disk to twist the wire intermediate the stretches thereof.

The pawl 23 has a pin 27 fixed thereto which may be employed for lifting the same in order to permit free rotation of the disk 15.

Having thus described the invention, I claim:

1. A device of the class described, comprising a pair of pivotally connected jaws, one jaw having a leaf spring secured thereto, a head carried by said jaw, a ratchet disk rotatable in the head, a pawl carried by said jaw for engagement with the disk, said spring being engaged with the pawl to hold the same yieldably engaged with the periphery of the disk, and a wire twisting tongue carried by the disk.

2. A device of the class described comprising a pair of pivotally connected jaws having handles, a bar carried by one of the handles, the other handle having an opening therein for passage of the bar, a latch carried by the latter handle for engaging the bar to hold the jaws in clamped relation, a head carried by one jaw and having a ratchet disk rotatable therein, a pawl carried by the associated jaw, a spring engaged with the pawl for yieldably holding the same engaged with the periphery of the disk, and a wire twisting tongue carried by the disk.

In testimony whereof I affix my signature.

WENDELL P. MARTINET. [L. S.]