No. 661,041. Patented Nov. 6, 1900.

G. H. CULLEN.

WIRE FENCE TIGHTENER.

(Application filed Apr. 5, 1900.)

(No Model.)

Fig. 1.

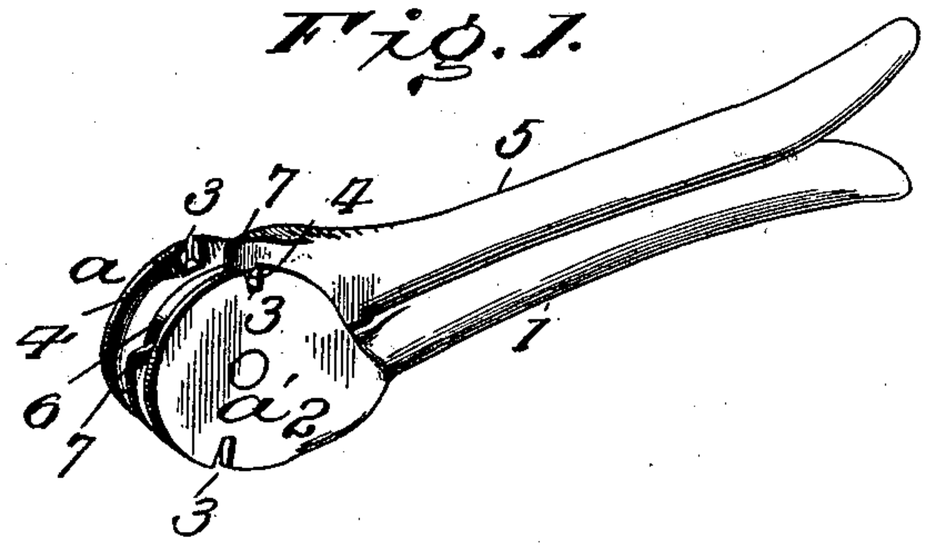


Fig. 2.

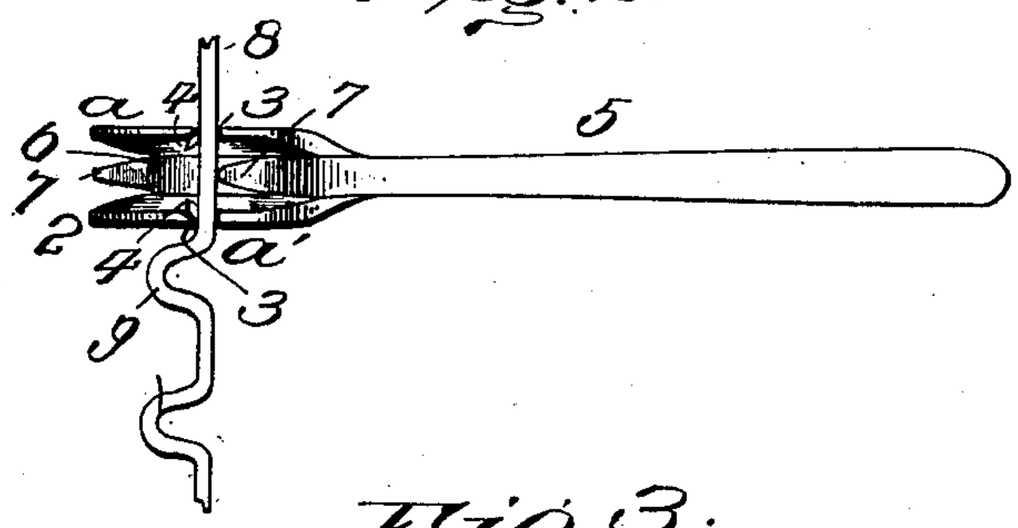


Fig. 3.

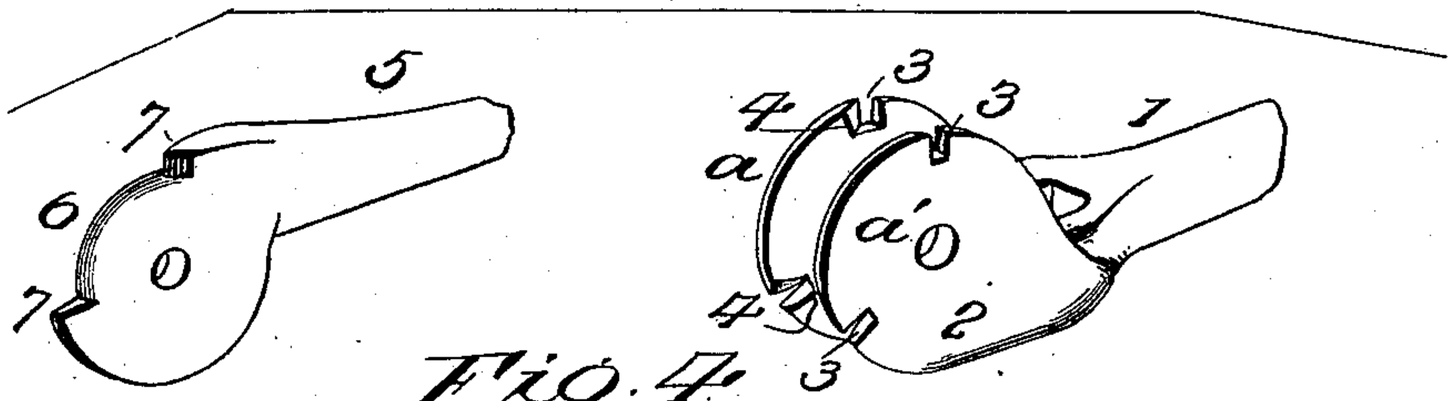


Fig. 4.

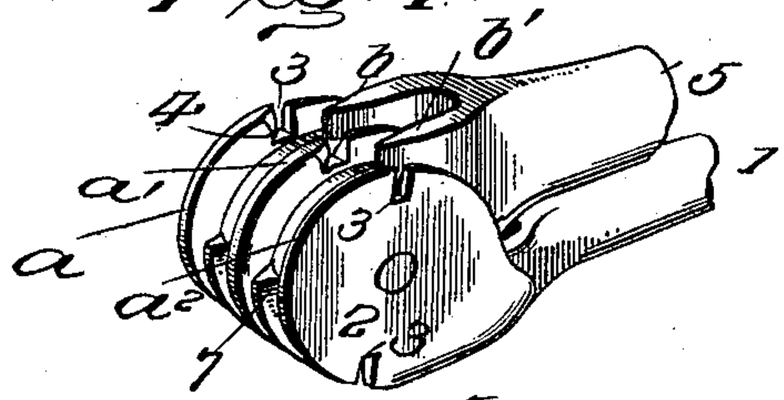
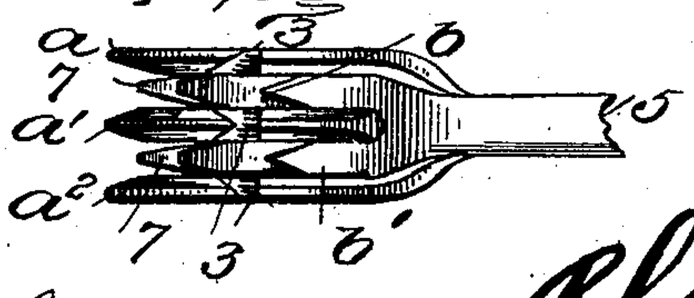


Fig. 5.



Witnesses
Jno. Innis
Gladys L. Thompson

Inventor
George H. Cullen

By R. H. & R. Lacey his Attorneys

UNITED STATES PATENT OFFICE.

GEORGE H. CULLEN, OF SITKA, INDIANA.

WIRE-FENCE TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 661,041, dated November 6, 1900.

Application filed April 5, 1900. Serial No. 11,725. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. CULLEN, a citizen of the United States, residing at Sitka, in the county of White and State of Indiana, have invented certain new and useful Improvements in Wire-Fence Tighteners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has relation to tools for taking up slack in fence-wires without looping and twisting the same or necessitating the drawing of staples or the use of means for coiling and which will admit of the wire contracting and expanding without producing any sag.

The tool is constructed so as to crimp the wire at any point in its length between adjacent posts, the crimps taking up any slack and maintaining the wire under tension at all times.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and the drawings hereto attached.

While the essential and characteristic features of the invention are necessarily susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the tightener. Fig. 2 is a plan view showing the manner of operation of the device. Fig. 3 is a detail view in perspective, showing the parts separated. Fig. 4 is a perspective view of a modification for making a number of crimps at one operation. Fig. 5 is a top plan view of the modification.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The tool comprises, essentially, two wire-crimping members pivotally connected and constructed to form either a single or a number of crimps at one operation, according to the size of the implement. Each member consists of a handle and a head, the latter being shouldered or notched, according to its relative position. The member having the notched head consists of the handle 1 and head 2 of approximately circular outline and composed of spaced parts $a\ a'$. Notches 3 are formed in the edges of the parts $a\ a'$ in transverse alinement, and one wall of the notches is straight and the other beveled upon the inner side, as shown at 4. There may be as many sets of notches 3 as desired, two being deemed amply sufficient. The shouldered member of the tool is composed of the handle 5 and the head 6, the latter entering the space formed between the parts $a\ a'$ and conforming in outline therewith. The handles of the respective members have the heads arranged at one side thereof so as to overlap and admit of the handles lying in the same plane and touching at their inner edges. The head 6 is provided with shoulders 7, formed by cutting away a peripheral portion thereof, said shoulders being oppositely beveled from a central point to provide ample space for the reception of the crimped portions of the wire when the tool is in operation. The beveling of the shoulders 7 and one wall of the notches 3 prevents cutting of the wire during the formation of the crimp and admits of the wire sliding through the notches as the depth of the crimp increases. To further provide for the sliding movement of the wire in the notches 3, the outer edge portions of the parts $a\ a'$ are outwardly beveled or flared upon the face adjacent to the head 6. One of the shoulders 7 is designed to coöperate with a set of notches 3 and the other shoulder with the other set of notches. By this means provision is had for crimping the fence-wire either by spreading the handles 1 and 5 or by moving said handles together, according to the set of notches and coöperating shoulder brought into play.

The tool shown in Fig. 1 and herein described is adapted to form a single crimp only at one operation, and when it is required to form a plurality of crimps simultaneously the head 2 of the notched crimping member will comprise more than two parts, as $a\ a'\ a^2$, depending upon the number of crimps to be formed. As shown in Figs. 4 and 5, the head 2 comprises three parts $a\ a'\ a^2$, having corresponding notches in transverse alinement, and the number of parts forming the head may be increased as desired. The head 6 of

the crimping member coöperating with the head 2 of the form of tool illustrated in Figs. 4 and 5 comprises parts $b\ b'$, spaced so as to enter the spaces formed between the parts $a\ a'\ a^2$. The parts $b\ b'$ are formed with shoulders 7 in transverse alinement to coöperate with the notches 3 of the adjacent parts $a\ a'\ a^2$.

From the foregoing it will be understood that the tool may be single, double, or of any extent, according to the number of crimps to be formed at one operation, and in every instance the general construction is the same, the one difference being in the number of crimping-heads, which will vary according to the capacity of the tool.

In the event of it being required to take up slack in a fence-wire, whether smooth or barbed, the tool is applied so as to receive the wire 8 in corresponding notches 3 with the shoulder 7 at one side of the wire, and upon operating the handles 1 and 5 the crimping members are moved so as to deflect the portion of the wire extending across the space formed between the parts $a\ a'$, the shoulder 7 bearing against and acting jointly with the beveled walls of the notches 3 to produce the crimp 9. Any number of crimps is formed in the wire, so as to take up slack therein and provide a tension, and these crimps allow for contraction of the wire when the temperature is materially reduced and again take up any slack incident to an expansion of the wire when the temperature increases.

Having thus described the invention, what is claimed as new is—

1. A tool for tightening fence-wires by the formation of crimps therein, the same consisting of a handle provided at one end with spaced parts of approximately circular outline with their inner peripheral portions outwardly flared and transversely notched, and a second handle having an approximately circular head about equal in diametrical extent to the aforementioned circular parts and pivoted concentrically therebetween and having its outer edge portion oppositely beveled and transversely notched, substantially as described.

2. A tool for tightening fence-wires by the formation of crimps therein, the same consisting of a handle provided at one end with spaced parts of approximately circular outline with their inner peripheral portions outwardly flared and transversely notched, one wall of the notches being straight and the other wall beveled, and a second handle having an approximately circular head about equal in diametrical extent to the aforementioned circular parts and pivoted concentrically therebetween and having its outer edge portion oppositely beveled and transversely notched, one wall of the notch being straight and the other oppositely beveled from a central line, substantially as specified.

3. A tool for tightening fence-wires by the formation of crimps therein, the same consisting of a handle having a head composed of a plurality of spaced parts of approximately circular outline having the adjacent faces of their peripheral portions outwardly flared, and having sets of transversely-alined notches at intervals in their circumferential length, corresponding walls of the notches being oppositely beveled, and a second handle having a head composed of a number of spaced parts of approximately circular outline and fitted between the parts of the aforementioned head and pivoted concentrically therewith, the two heads being of about equal diameter, and the parts of the last-mentioned head having their peripheral portions oppositely beveled and formed with a series of transversely-alined notches with corresponding walls beveled in an opposite direction to the beveled walls of the notches formed in the parts of the first-mentioned head, substantially as specified.

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

GEORGE H. CULLEN. [L. S.]

Witnesses:

ELVIN H. HOSHOUT,

L. W. REPROGLE.