Jan. 12, 1937 R. C. TUMMINELLO 2,067,359

STAPLE

Filed June 25, 1936

Fig. 1.

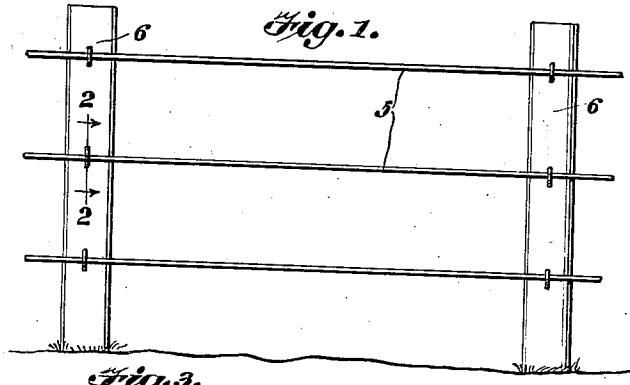


Fig. 2.

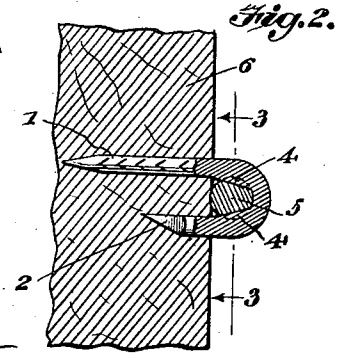


Fig. 3.

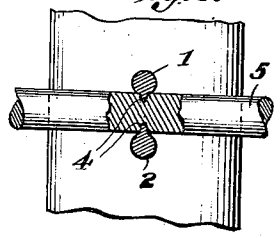


Fig. 4.

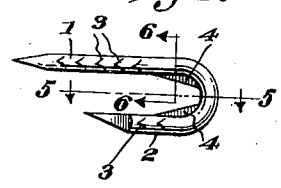


Fig. 5.

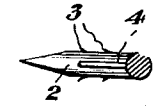


Fig. 6.

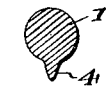


Fig. 7.

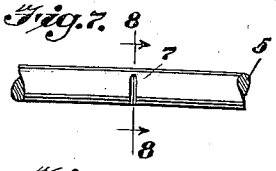


Fig. 8.

Fig. 12.

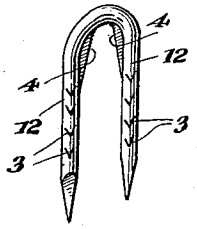


Fig. 13.

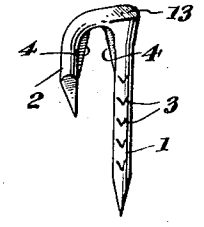


Fig. 9.

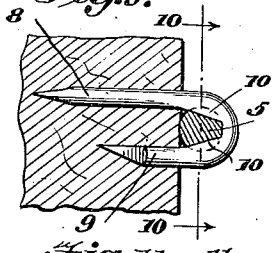


Fig. 10.

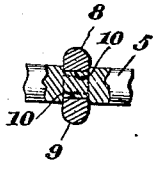


Fig. 14.

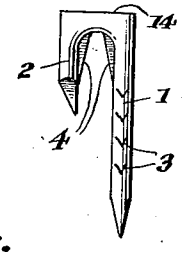


Fig. 15.

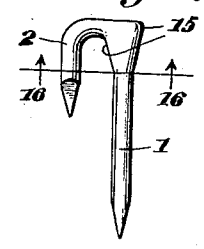


Fig. 11.

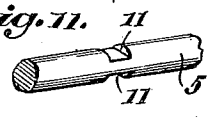
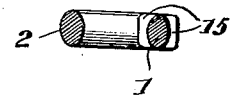


Fig. 16.



Inventor,
ROBERT C. TUMMINELLO.

By E. E. Wrooman & Co.,
His Attorneys.

Patented Jan. 12, 1937 2,067,359

UNITED STATES PATENT OFFICE

2,067,359

STAPLE

Robert C. Tumminello, Colfax, La.

Application June 23, 1936, Serial No. 86,834

1 Claim. (Cl. 85—49)

This invention relates to staples.

An object of the invention is the construction of a simple and efficient staple which will hold wire taut on posts, whereby fencing is more efficient, as well as more pleasing to the eye.

Another object of the invention is the construction of novel biting means at the extreme inner end of the staple, to grip the wire, when in position, for preventing any sliding of the wire through the staple.

A still further object of the invention is the construction of a novel staple which is provided on its body with an inverted V-shape biting or wire-gripping means, said biting means being formed only at the inner end of the body and extending longitudinally thereof.

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

In the drawing:

Figure 1 is a view in elevation of part of a wire fence, showing my improved staples applied thereto.

Figure 2 is a sectional view taken on line 2—2, Figure 1, and looking in the direction of the arrows.

Figure 3 is a sectional view taken on line 3—3, Figure 2, and looking in the direction of the arrows.

Figure 4 is a view in side elevation of one of the embodiments of the present invention.

Figure 5 is a sectional view taken on line 5—5, Figure 4, and looking in the direction of the arrows.

Figure 6 is a sectional view taken on line 6—6, Figure 4, and looking in the direction of the arrows.

Figure 7 is an enlarged fragmentary elevation of a wire, showing the slight notch or "bite" therein, caused when the staple is holding the same on the post.

Figure 8 is a sectional view taken on line 8—8, Figure 7, and looking in the direction of the arrows.

Figure 9 is a view in side elevation of another embodiment of my improved staple.

Figure 10 is a sectional view taken on line 10—10, Figure 9, and looking in the direction of the arrows.

Figure 11 is a fragmentary view of a piece of wire, showing the depressed or indented portions caused by the staple, as shown in Figures 9 and 10.

Figure 12 is a perspective view of another embodiment of the staple, in which view the staple is of an inverted U-shape structure, with barbs on its sides or legs.

Figure 13 is a perspective view of another embodiment of the present invention, showing an enlarged or reinforcing head, with the long leg of the staple provided with barbs.

Figure 14 is another embodiment of the present invention, shown in side elevation, and having a flat top.

Figure 15 is a view in side elevation of another embodiment of the present invention showing an enlarged head, the top of which is flat across.

Figure 16 is a sectional view taken on line 16—16, Figure 15, and looking in the direction of the arrows; in this figure the wire used is perfectly oval-shape in cross section, while in Figure 6 the cross section shows a wire round in shape.

In the accompanying drawing I have shown several embodiments of my invention the same being made or constructed of suitable material, and in cross section the staple in each instance may be of any desired shape, such as round (Fig. 6), Oval (Fig. 16), etc. In Figures 1 to 6 the embodiment comprises a staple in which the body includes a long leg 1 and a short leg 2. The leg 1 is sharpened at its outer end in planes at right angle to the planes in which the outer end of leg 2 is sharpened. The legs may be barbed as at 3. At the inner end of the body I form an inverted V-shape biting means, which comprises short cutting teeth 4 that extend longitudinally of the body or legs and are formed only at the inner end of the body. As shown in Figure 1, by using my improved staple, the wire 5 is held taut upon the post 6 because the wire cannot creep or slide through the staple after it has been once stretched and fastened by the staples to the post. This produces a highly satisfactory fencing, because the general appearance of the fencing is always satisfactory, and the stock in the field is prevented from creeping or getting between the strands, since no room is allowed for such escaping, by reason of the strands sagging down, as is the case when old style staples are used. The improved biting means engages the wire as seen in Figs. 2 and 3, causing a slight notching 7 of the wire, without destroying its efficiency. The degree of notching the wire may be varied by in-

creasing or decreasing the width of the webs or teeth 4 as the operator desires. As will be seen in Figure 6 the tooth 4 is not too sharp; it is somewhat blunt, which makes for an efficient gripping of the wire, to prevent it from creeping through the staple, when the fence is once finished.

In Figures 9 to 11 the embodiment shows leg 8 and leg 9 formed at their inner ends with flat depressing means 10, which is in this embodiment an inverted V-shape biting means only at the inner end of the body and extending longitudinally thereon. As will be seen in Figures 10 and 11, the wire 5 is compressed at 11, by this embodiment, which prevents the wire from creeping through the staple when once applied, and thereby prevents the wire of the fence from sagging down, etc. In this embodiment no barbs are shown on the legs of the staple, since it is optional to apply same if the operator so desires.

In Figure 12, the embodiment comprises a substantially U-shape staple with the legs 12 of the same length and provided with barbs 3. The teeth 4 are employed in this embodiment similar to the teeth of the embodiment shown in Figures 1 to 6.

In Figure 13 the embodiment is similar to the embodiment shown in Figures 1 to 6, except that a large head 13 is provided which facilitates driving the staple into the post because it provides a better contact surface for the operator's tool. In this embodiment the construction of my novel "biting" means is the same as in the embodiments of Figures 1 to 6, and 12.

In the embodiment shown in Figure 14 the staple is provided with a flat or straight head 14; the other parts of the staple being similar in construction to the embodiments hereinbefore described.

In Figures 15 and 16 I have shown a staple preferably formed out of wire oval-shape in cross section. This staple comprises the long leg 1 and the short leg 2 with an enlarged overhanging head 15; this head is an excellent means for receiving the driving blows of the operator's tool when the staple is being positioned upon the post.

It will be understood that in the embodiments disclosed in the accompanying drawing, the forming of the penetrating ends, the barbs, and the length of the legs is optional with the manufacturer or constructor of the staples, as well as the forming of the body or legs out of round, oval or other type of wire-like material.

I am aware that other types of gripping means may have been resorted to prior to my invention, but I have provided a novel, simple and efficient "biting" or depressing means, susceptible of being applied to various types of staples, as exemplified in the embodiments of the accompanying drawing.

While I have described the preferred embodiments of my invention and illustrated 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 same and I, therefore, reserve the right to make such alterations or changes as shall fairly fall within the scope of the appended claim.

What I claim is:

A staple comprising a body provided with legs forming a bridge at their meeting ends, and sharp ribs wider at their center and disposed only at the juncture of the bridge and the legs of the staple, forming substantially an inverted V-shaped biting means.

ROBERT C. TUMMINELLO.