

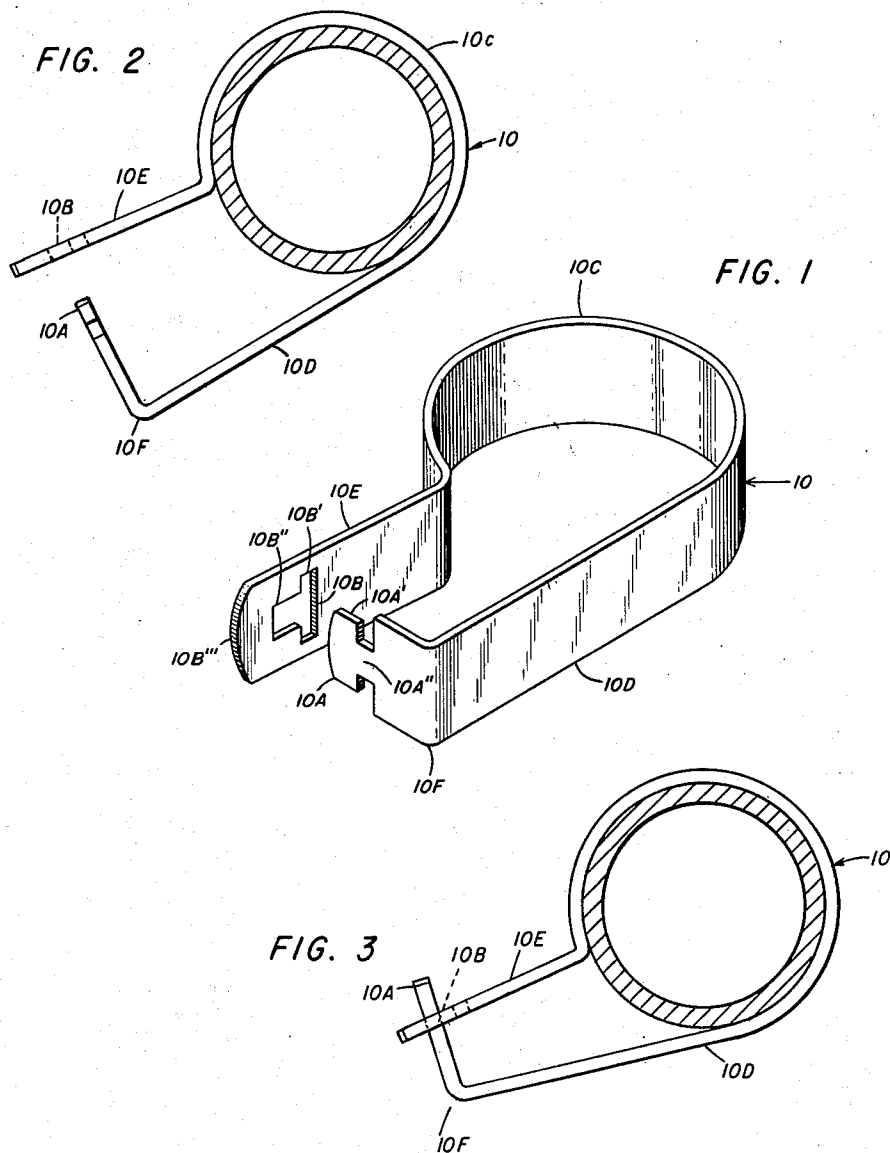
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FENCE POST CLAMP

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FENCE POST CLAMP

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1 Claim. (Cl. 24—259)

In its broader aspects my invention relates to locking devices, while more particularly it concerns a unitary and one-piece tension locking band or clamp for directly fastening wire fencing in position.

Among the objects of my invention is to provide a band-like tension clamp of the general type described, simple in both production and construction and which, thus inexpensively produced, can thereupon be applied rapidly and directly and without use of tools to secure in position a tautened fence, and which clamp, once positioned, securely holds the tautened fence against unintentional slippage or removal, the clamp being unitary, self-contained, of small compass and symmetrical in exterior outline, with no parts projecting laterally beyond the circumference of that loop portion of the clamp which encircles the fence post.

Other objects and advantages will in part be obvious, and in part more fully pointed out during the course of the following description, particularly when taken in the light of the accompanying drawing.

Accordingly, my invention may be considered as residing in the unitary construction which characterizes my new clamp, in the shaping and proportioning thereof, in the several features of construction and as well, in the relationship of each of the foregoing with one or more of the others, the scope of the application of all of which is more fully set forth in the claim at the end of this disclosure.

In the drawing wherein I have disclosed that embodiment of my invention which I prefer at present:

Fig. 1 is an isometric view of the formed clamp of my invention prior to application to and locking about the fence post to which it is to be applied, and

Figs. 2 and 3 are plan views on reduced scale respectively showing the clamp prior to and during locking about a fence post.

Like reference characters denote like parts throughout the several views.

As heretofore practiced the application of metal fencing to supporting and carrying posts, be these either line or corner posts, has presented difficulty viewed from a practical standpoint. The basic reasons for this are readily evident. First of all, the fencing must be pulled taut. Usually a fence stretcher is used for this purpose. So tautened, the fence must be nicely lined up with the rigidly bottomed post to which it is to be made fast and on which it is to be carried. Now, even though such stretchers usually incorporate an included toggle joint, nevertheless considerable dexterity is required for proper manipulation of this stretcher. Particularly is this so during application of the permanent clamp to the stretched wire. Thus, usually a helper has been required to apply the clamp while the first operator maintains the fence in tautened condition. Moreover, known clamps for this purpose have in large measure been of multipart construction.

Now, where multipart clamps are employed, it is found

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that this multipart construction requires application of the several parts thereof in required sequence. And this, while in the field and while securing the clamp in position. Thus it frequently happens that parts of such multipart clamps, illustratively nuts, bolts and the like, are dropped to the ground. When this happens, particularly on rough and unfinished land, it is frequently difficult if not impossible to recapture the lost part. Thus not only is considerable time and skill required in assembling these multipart clamps, but as well, appreciable complexity, time and increased cost in installation are demanded. Replacement parts must be both stocked and provided in the field.

Experience has established that in use the joints between the parts of these multipart clamps become sources of potential weakness. Illustratively, should the parts remain in good condition they tend to loosen and finally to work completely apart. On the other hand, upon deterioration in the field, as by rusting, a phenomenon frequently displayed by these untreated bolts and nuts, they tend to "freeze," stain and become unstable. For these many reasons among others, therefore, producers and installers of metal fence have recognized a demanding urgency for clamping means to secure fencing to supporting posts and the like which are simple and inexpensive in construction.

Accordingly, an important object of my invention is to provide a one-piece, unitary and self-contained fence clamp which can readily be provided in simple and direct manner, with a minimum of procedural and manipulative steps, with little if any waste of material, with modest labor demand of but moderate skill and at minimum production cost; which clamp, once produced, can be readily applied in firm clamping and locking position by simple and direct finger manipulation and without necessity of tools; which clamp upon installation, is pleasing and generally consistent in appearance with the fencing on which it is applied and is characterized by its regularity in outline and in its absence of projecting edges; and which clamp displays long useful life with pleasing appearance throughout the same.

And now having reference to the drawing wherein I have illustratively disclosed that embodiment of my invention which I prefer at present, it will be seen that I provide a clamp comprising the strip 10 dimensioning in inches of about $10\frac{1}{2} \times \frac{7}{8} \times \frac{1}{8}$. And preferably I construct this of metal possessing spring-like qualities. Typically, but not necessarily, I die-stamp the strip out of a single sheet of metal.

In the course of die-stamping I provide a T-shaped terminus or tongue 10A at one end (Fig. 1). While just short of the opposite end of the strip, about $\frac{5}{16}$ of an inch, I provide a generally complementary but slightly larger T-shaped slot 10B. The construction is such that the T-head of the formed clamp is adapted to spring into and be engaged in the T-shaped slot near the opposite end of the clamp. And I construct the T-head and T-slot so that only enough metal is provided in the projections beyond the same to impart the minimum required strength qualities. In this manner, and with the construction pointed out hereinafter, I ensure that neither the T-head of the clamp nor the end of the clamp beyond the T-slot will project any appreciable distance to the exterior.

The dimensions of the T-head and the T-slot are so proportioned to each other that the T-head will be nicely but readily received in the T-slot, the enlarged head 10A' of the T-head just clearing into and through the large end 10B' of the T-slot. Thereupon, and through spring action, the shank portion 10A'' of the T-head 10A will nicely enter and engage within the reduced-dimensioned

shank 10B" of the T-slot 10B. So engaged, the T-head is permanently retained under spring action in locking engagement.

In desired suitable manner I shape strip 10 to provide a centrally disposed and yoke-shaped portion 10C of generally circular configuration (see also Figs. 2 and 3). Either I may subject this strip 10, following initial die-stamping from sheet metal, to subsequent forming as around a suitable mandrel, thereby providing the yoke-shaped collar portion, or I may provide suitable forming dies of somewhat greater complexity than employed for providing the clamp in a single-stage operation.

In applying the clamp of my invention about the fencing in the region of the fence post, no part of the clamp projects outwardly beyond the confines of the post. Not only would such projection be unsightly, but it comprises a likely source of snagging the apparel of the passer-by, to the extent of being a hazard. The substantial elimination of any lateral projection of the end of the clamp, in direction generally normal to the fencing itself and beyond the circumference of the yoke 10C, comprises an important object of my invention. To ensure that this condition maintains I provide clamp 10 with two leg portions 10D and 10E, the leg portion 10D being adjacent the T-head 10A and the leg portion 10E including the T-slot 10B. These leg portions are not of the same length, that of the leg 10D being substantially greater than that of leg portion 10E. The leg portion 10D extends tangentially or nearly tangentially into the yoke portion 10C, while leg portion 10E extends radially and normally from the opposite end of the yoke portion 10B. The two leg portions 10D and 10E are nearly but not quite parallel to each other so that prior to use, these legs have slight outward flare relative to each other (see Fig. 2 particularly).

As seen in the drawing at 10F I bend the free, outer end of the leg portion 10D nearly at right angles to the major extent thereof. In this manner I provide an in-turned terminal end having a depth of approximately 1/2 an inch. It will be seen that the construction is such that the leg portions 10D and 10E comprise complementary jaws which can be slipped over and downwardly along a cooperating fence post, and in line with the fencing. Thus the clamp is so disposed that its yoke portion 10C encircles the post and lies generally parallel with the fencing. This fencing has been preliminarily tautened by means such as a stretcher. And through the use of a toggle feature of such stretcher the fencing is maintained stretched while the clamp 10 is being applied.

In putting up a length of fencing, the first clamp is slipped over the top of the fence post and, embracing the side of the fencing, is slipped toward the bottom end of this latter. Thereupon, by a simple finger manipulation, the leg portions 10D and 10E are compressed toward each other so that the enlarged head 10A' of the T-head 10A engages the enlarged slot 10B' of the T-slot 10B. After the head 10A has fully entered the slot 10B the spring action of the metal is such that the slightly flared legs 10D and 10E tend to separate, thus forcing the throat 10A" of the T-head 10A into the leg 10B" of the T-slot 10B in firmly interlocking engagement (see Fig. 3).

The requisite number of like clamps are applied in similar manner, whereupon the fencing is made permanently but removably fast to the post. The stretcher then can be released and removed. In the process of installation I intentionally provide that to insert the tongue 10A in the slot 10B it is necessary to press the tongue with considerable force. Now, the yoke section 10C and the short leg 10E are sufficiently braced against the fence post 16 itself, and the leg 10D is sufficiently yielding at its free and post-remote end, to permit the ready engagement of tongue and slot.

It is a feature of my construction that once the clamp

is applied, no part thereof projects laterally and away from the fence, beyond the outlines of the yoke portion 10C of the clamp. The tab portion 10B"', which projects beyond the interlocking T-head and T-slot extends parallel to the fence itself and closely adjacent thereto. Thus it cannot serve as a source of snagging. The only laterally extending portion of the clamp, and which would project beyond the leg portions 10D and 10E, is the enlarged head portion 10A' of the T-head. But this projects only to a slight extent beyond the leg portion 10E and terminates well within the circumferential outlines of the circular yoke portion 10C. Thus it is the circular yoke 10C against which the passer-by brushes. And this shields him against contact with the T-head. This advantageous feature attends the tangential merging of the leg portion 10D, which carries the T-head 10A, with the yoke portion 10B.

The arrangement noted is quite important in achieving assurance that no undesirable projection takes place. For should either of the alternative events exist that both legs be provided extending radially outwardly, or should it be the slot-bearing leg 10E which opens tangentially and the T-head-bearing leg 10D which opens radially and normally, then when the clamp is applied about the fence post the head would extend outwardly and beyond the geometry of the yoke head and serve as a source of snagging. As it is, and with the clamp properly applied, the leg portion 10D will be disposed outermost in that position which is most pleasing and facing towards the direction of greatest traffic, whereby the limited projection of the T-head 10A will be in opposite direction, in relatively inconspicuous manner.

By the use of my new clamp, fencing is quickly installed in minimum time. Competitively, important advantages become available to the contracting installer. When applied, my new clamp is pleasing and harmonious in appearance. Formed of treated metal, it will not rust. It has long useful life. When desired and at any time, even following prolonged service, it can be readily and simply removed, without interposition of tools, when desired. And this, and as has been stated, after prolonged use in the field and in the open. Of one-piece construction, its cost is low. It is quite sturdy. It can be both applied and removed without the use of tools. It does not and cannot slip while installed and in service. Except for such stretching which may take place in the fencing itself, it is maintained taut throughout its period of service. The tongue does not protrude beyond the line of the fence.

All the foregoing as well as many other highly practical advantages attend the practice of my invention.

It is apparent from the foregoing that once the broad aspects of my invention are disclosed, many modifications of the present embodiment will readily suggest themselves to those skilled in the art. And as well, many embodiments thereof will likewise present themselves, all falling within the scope of my present invention. Accordingly, I desire the foregoing disclosure to be considered as purely illustrative and not as comprising limitations.

I claim as my invention:

A one-piece clamp for securing fencing to a post, said clamp being formed of a single strip of spring metal and comprising an elongated band shaped to provide a generally centrally disposed circular yoke portion for encircling a fence post, with leg portions extending therefrom in spaced and slightly flaring relation to each other, one of said leg portions having an included T-shaped slot and the other leg portion having an end portion inturned toward the first leg portion and terminating in a T-shaped tongue directed generally normally to and removably engageable in said slot, the tongue-bearing leg portion extending generally tangentially from the yoke portion and the slotted leg portion extending substantially radially and normally from the yoke por-

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tion, said tongue and slot being adapted for releasable interlocking of each other about said fencing and assuring support of the same substantially free of turning about said post.

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