

Nov. 25, 1969

G. SIMON ET AL

3,480,256

BARBED WIRE

Filed Dec. 5, 1966

FIG. 1

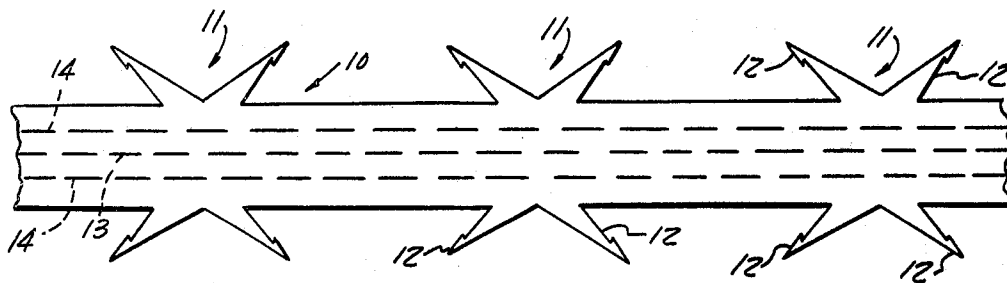


FIG. 2

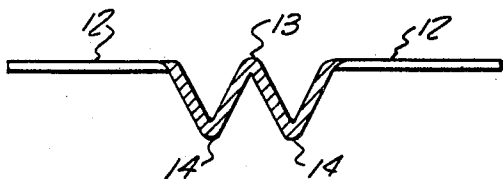


FIG. 4

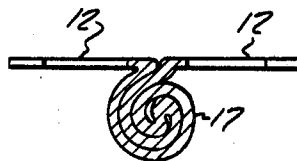


FIG. 3

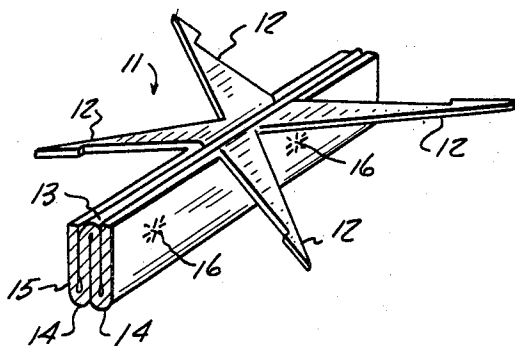
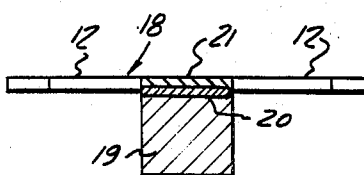
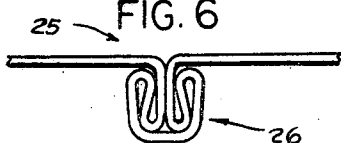


FIG. 5



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FIG. 6



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BARBED WIRE

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Filed Dec. 5, 1966, Ser. No. 599,246

Int. Cl. E04h 17/04; B21f 25/00; B21c 37/04

U.S. Cl. 256—8

2 Claims

ABSTRACT OF THE DISCLOSURE

This disclosure relates to a barbed wire formed of an elongated sheet metal ribbon having cut barbs formed integrally along its edges and a central hard bead. The bead may be formed by longitudinally bending the center portion of the ribbon to form a compacted, centrally located, narrow strip, offset from the plane of the ribbon. Alternatively, it may be formed by welding a wire strip to the center of the ribbon. In either case, the strip or bead is hardened to reinforce the assembled barbed wire and make it more difficult to cut.

This invention relates to barbed wire and a method for making same.

Conventional barbed wire formed of metal wire to which wire barbs are fastened, is relatively expensive, particularly in large quantities and is easily cut or broken. Attempts have been made in the past to form barbed wire out of metal ribbons, the barbs being integral with the ribbon, but these too, are relatively easily cut or broken and are relatively expensive.

Hence, it is an object of this invention to form barbed wire out of an elongated, sheet metal ribbon, with the barbs integral with the edges of the ribbon, and with the ribbon being formed with a centrally located, hardened bead which makes it more difficult to break or cut the wire and with the assembled barbed wire being less expensive than conventionally available barbed wire.

A further object of this invention is to provide barbed wire out of sheet metal ribbons whose center portions are formed as reinforcing beads which are hardened to prevent cutting or breaking.

These and other objects and advantages of this invention will become apparent upon reading the following description of which the attached drawings form a part.

In these drawings:

FIG. 1 is a plan view of a portion of a single ribbon in its flat condition.

FIG. 2 is an enlarged cross-sectional view showing the ribbon partially bent for forming the bead.

FIG. 3 is an enlarged, fragmentary, perspective view of the completed barbed wire.

FIG. 4 is an enlarged cross-sectional view showing a modified form of bead, and

FIG. 5 shows a further modified form of bead and also FIG. 6 shows a further modified form of bead.

FIG. 1 illustrates an elongated, sheet metal ribbon 10 upon whose edges are integrally cut or formed barb clusters 11 composed of opposing pairs of barbs 12. The ribbon is preferably formed by slitting or otherwise cutting a large sheet of sheet metal into the ribbon with integral barbed formations as shown in FIG. 1.

The central portion of the ribbon, intermediate its side edges, are folded or bent along longitudinal fold lines 13 and 14 into a W-shaped cross section as seen in FIG.

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2. The folds are squeezed together to form a central bead 15, which may be welded together at 16 for additional strength and rigidity. Thereafter, the barbed wire is run through an induction hardening machine for induction hardening the bead 15 to a point where it is considerably harder than the initial starting material and so that the completed barbed wire has a hardened bead which is harder than the barbs 12. The bending and folding may be accomplished in suitable conventional roll forming and bending machinery so that the completed wire may be continuously produced at a high rate of speed and extremely economically.

FIG. 4 illustrates barbed wire which is similar to that previously described but in which the bead 17 is rolled into a round shape preferably, or possibly into a squarer shape, to give the bead more cross-sectional mass, and thereby increase its strength and resistance to cutting and breaking. Again, such bead 17 is hardened in a conventional induction hardening machine, in the same way as mentioned above.

FIG. 5 illustrates a modification in which the ribbon 18 is similar to that shown in FIG. 1, but in which the center portion 21 is narrower and is not folded or bent. Instead, the bead is formed of a hardened wire 19, preferably square in cross-section, which is arranged in face to face contact with the ribbon central portion and is secured thereto by a continuous weld 20. This provides a solid, hardened mass which is extremely difficult to cut or break.

FIG. 6 illustrates a modification in which the ribbon 25 is formed with a double bent center bead 27 whose folds may be rigidly secured together as continuous welding to thereby provide a solid mass, which may be hardened as mentioned above.

This invention may be further developed within the scope of the following claims. Accordingly, it is desired that the foregoing description be read as being merely illustrative of an operative embodiment of this invention, and not in a strictly limited sense.

Having fully described an operative embodiment of this invention, we now claim:

1. Barbed wire comprising a thin, narrow sheet metal ribbon longitudinally bent into four, equal width, flat layers, compacted together into face to face contact to form a four-ply approximately rectangular shaped in cross-section, straight strip, with the layers being interconnected along their lengths by spaced apart spot welds; the free edges of the two outer layers having pairs of flat barbs formed integral with the ribbon and extending outwardly of the strip in a plane arranged at right angles to the outer layers; each of said pairs of barbs being in the form of an elongated, narrow, triangular shape whose base is integral with its layer and is considerably shorter than its two opposite sides, with one of the opposite sides forming an obtuse angle with the base and the other forming an acute angle relative to the base, with the two barbs of each pair being identical, but mirror images of each other so as to extend oppositely from each other, with each being directed at an acute angle relative to the axis of the strip; with each pair of barbs on one outer layer being aligned with a pair of barbs on the opposite layer to thereby form a cluster of four barbs; and each cluster being spaced a considerable distance from the next adjacent cluster.

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2. Barbed wire as defined in claim 1, and the metal forming the layers being of a greater hardness than the metal forming the barbs.

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U.S. Cl. X.R.

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