

Nov. 14, 1950

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WIRE FENCE FABRIC HAVING SELECTED HORIZONTAL
STRANDS ELECTRICALLY INSULATED

2,530,247

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2 Sheets-Sheet 1

Fig. 1.

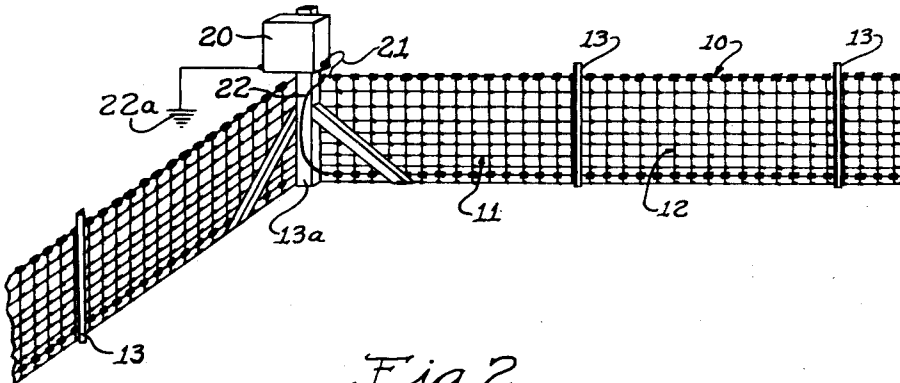
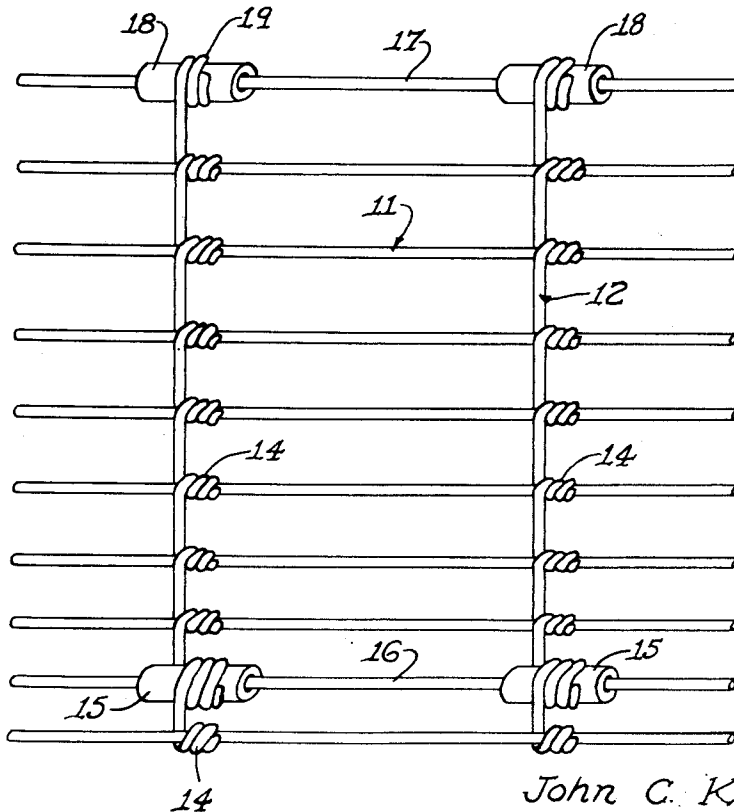


Fig. 2.



John C. Koonz
Inventor.

By Kenneth T. Snow
Att'y.

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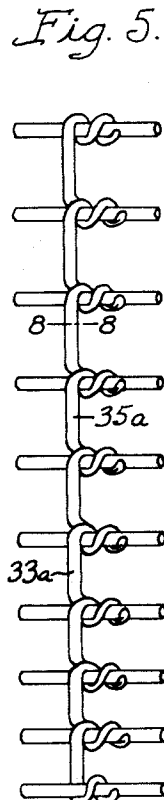
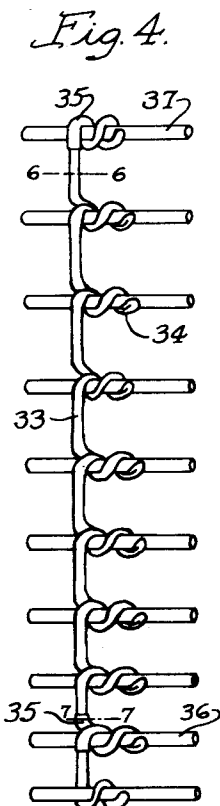
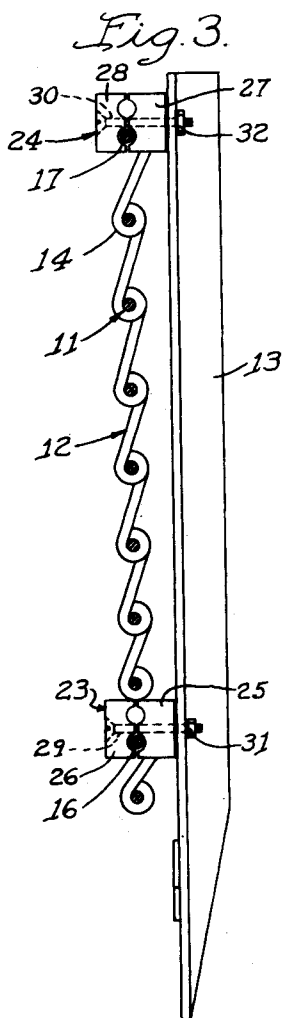


Fig. 6.

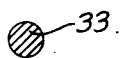


Fig. 8.



Fig. 7.



John C. Koonz
Inventor
By *Kenneth T. Snow*
Atty.

UNITED STATES PATENT OFFICE

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WIRE FENCE FABRIC HAVING SELECTED
HORIZONTAL STRANDS ELECTRICALLY
INSULATED

John C. Koonz, Fort Wayne, Ind.

Application July 13, 1946, Serial No. 683,346

3 Claims. (Cl. 256—10)

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This invention relates to a new and improved combination fence and particularly to a wire fence adapted to form an enclosure and having certain portions thereof electrically charged.

An important object of this invention is to provide a regularly manufactured pre-woven fence supplied with certain of the horizontal strands of wire electrically insulated from the remainder of the fence so that these insulated wires may be electrically charged if desired.

Another important object of this invention is to provide a wire fence effective for use as a general farm fence for enclosing all types of animals.

A further object of this invention is to construct a pre-woven general utility wire fence with certain of the component horizontal wire strands electrically insulated from the other wire strands constituting the remainder of the fence.

A still further object of the invention is to optionally cause any one or more of a plurality of electrically insulated wire strands in a general purpose fence to be electrically charged to accommodate any specific use or uses to which the fence may be put.

Other objects and advantages of this invention will become apparent from the disclosures in the following specification and accompanying drawing, wherein:

Fig. 1 is a perspective view of a fence incorporating the principles of this invention.

Fig. 2 is an enlarged perspective view of the wire fence of this invention.

Fig. 3 is a vertical sectional view of the fence as shown in Fig. 1 and adjacent one of the supporting posts.

Fig. 4 is an enlarged perspective view showing a modified form of fence construction.

Fig. 5 is an enlarged perspective view showing another modified form of fence construction.

Fig. 6 is a sectional view taken on the line 6—6 of Fig. 4.

Fig. 7 is a sectional view taken on the line 7—7 of Fig. 4.

Fig. 8 is a sectional view taken on the line 8—8 of Fig. 5.

As shown in the drawing, the reference numeral 10 indicates generally the combination fence of this invention. The fence 10 consists of a plurality of interlocked horizontal and vertical strands of wire 11 and 12 respectively, and as shown in Figure 1 the wire fence is mounted on spaced posts 13.

There are many types of farm fences, certain of which are designed for enclosing just one kind

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of animal. Still other fences are constructed to effectively enclose more than one type of animal. These fences occasionally are supplemented with a barbed wire placed above the fence to increase the possibility of the animals remaining within the fenced enclosure. Recently, however, separate electrically insulated wires have been placed between fence posts either alone or spaced above regular wire mesh fences as in the case of barbed wire and then electrically charged to impart an electric shock to animals or the like which might come in contact with the charged wire.

The present fence combines the regular wire mesh fence, and in its construction certain of the horizontal strands of wire are electrically insulated from the remainder of the fence so that any one or several may be electrically charged depending on the type of animal placed within the enclosure. As shown in Figure 2 of the drawing, a plurality of horizontal strands 11 are vertically spaced apart and are maintained in such vertical spacing by a plurality of horizontally spaced vertical wires 12. In constructing the fence the vertical wires are twisted about each of the horizontal strands as shown at 14. The twist 14 comprises a winding of the vertical strand about the horizontal strand and takes place on each of the spaced horizontal wires, as a result of which a full wire fence is formed.

Electrical insulators 15, which may be made of any suitable material such as fibre glass, rubber or porcelain or the like, in the form of sleeve members are placed around and over the horizontal wire 16 positioned relatively close to the ground line. These electrical insulators 15 are positioned between the horizontal wire 16 and the vertical wires 12, and instead of winding the vertical wire directly about the horizontal wire 16 the twisting of the vertical wire takes place about and over the sleeve-like insulators 15. This winding of the vertical wire about the insulators 15 maintains them in fixed position relative to the remaining wire strands composing the fence and indirectly maintains the horizontal wire 16 in fixed but electrically insulated position with respect to the remainder of the fence. This procedure is followed on the top horizontal strand 17 of this combination fence. Electrical sleeve-like insulators 18 surround the top horizontal wire 17 and are maintained in position by winding the vertical strands thereabout. This winding is shown at 19.

The fence constructed as shown in Figure 2 has two horizontal strands of wire 16 and 17

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electrically insulated from the remainder of the wire fence. The horizontal wires composing the fence are spaced to afford an enclosure for small as well as large animals. If the fence is used for animals of various sizes it might be desirable to electrically charge both of the insulated strands of wire 16 and 17. However, if only small animals are enclosed within the fence, then it would be desirable only to charge the wire 16 which is positioned closely adjacent the ground line. Likewise if the fence is to enclose large animals, only the top wire 17 would be electrically charged. As shown in Figure 1, an electrical wire charging box 20 is mounted on the corner fence post 13a and has a lead wire 21 connected to either of the electrically insulated wires 16 and 17. If it is desired to charge both of the wires 16 and 17 simultaneously, then an additional connecting wire 22 is provided and is shown joining the two insulated wires 16 and 17. The other terminal on the charging box 20 is grounded as shown at 22a. In some instances it may not be desired to electrically charge any of the wires in the fence. However, it is the purpose of this invention to provide a combination fence with one or more of the horizontal strands of wire electrically insulated from the remainder of the fence so that the fence may be electrically charged to be effective against passage of any animal of any size.

As best shown in Figure 3, the fence is attached to the posts 13 through the medium of insulators 23 and 24. These insulators are the split type having inner and outer portions 25 and 26 and 27 and 28 respectively. Between the inner and outer portions of each of these insulators a socket is provided for the reception of the electrically insulated wires 16 and 17. Bolts 29 and 30 hold their respective inner and outer insulating portions together and also fasten the fence to the post 13 by means of nuts 31 and 32.

The fence construction shown in Figure 2 is commonly known as the "hinge" type. It gets its name from the fact that the vertical strand of wire 12 is composed of a plurality of short pieces just extending from one horizontal strand to another. The short vertical strands permit hinging of the fence about any horizontal strand. In contradistinction to this "hinge" construction, the modified fence shown in Figure 4 is of the "rigid" type wherein the vertical strands of wire 33 are in one continuous piece with loops drawn therein at the point of each horizontal strand and twisted thereabout at 34. In this modification also the type of electrical insulators between certain of the horizontal and vertical strands is different from that shown in Figures 1 and 2. The vertical strand 33 is provided with a rubber or similar coating 35 at the point of its twist on the horizontal strands 36 and 37. This electrically insulates the two strands 36 and 37 from the remainder of the fence. Figure 6 shows the uncovered vertical strand 33, and Figure 7 shows the rubber covering 35 at the points of intersection with the strands 36 and 37.

In the modification shown in Figure 5 the same

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type of fence as shown in Figure 4 is employed, but in this case the entire vertical strands are rubber coated so that all the horizontal strands are electrically insulated from the remainder of the fence and from each other. Figure 8 shows the vertical strand 33a having a full rubber or other insulating covering 35a. In this fence, any one or more, or even all the horizontal strands may be electrically charged as each one is properly insulated from the other.

Numerous details of construction may be varied throughout a wide range without departing from the principles disclosed herein, and I therefore do not propose limiting the patent granted hereon otherwise than as necessitated by the appended claims.

What is claimed is:

1. A pre-woven wire fence fabric including a plurality of horizontally spaced vertical wire strands, a plurality of vertically spaced horizontal wire strands, said vertical wire strands each having twisted portions around each of said horizontal wire strands at their intersections, and insulators positioned intermediate certain of said horizontal and vertical wire strand intersections and connected to said vertical strands, and an electrically chargeable wire extending through said insulator.

2. A pre-woven wire fence fabric as set forth in claim 1 in which the said insulators are disposed around the selected horizontal wire strands at the position of each intersection with a vertical wire strand whereby the vertical wire strands are twisted around the selected horizontal wire strands with the insulators separating all of the vertical wire strands from electrical contact with the selected horizontal wire strands.

3. A pre-woven wire fence fabric as set forth in claim 1 in which the said insulators comprise sleeve members telescopically engaging the selected horizontal wire strands at their intersection with every vertical wire strand.

JOHN C. KOONZ.

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