Oct. 18, 1949. C. HOMANN 2,485,288

INSULATOR SUPPORT

Filed Oct. 25, 1945

FIG. 1.

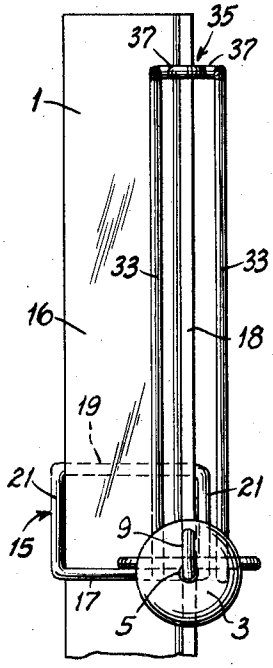


FIG. 2.

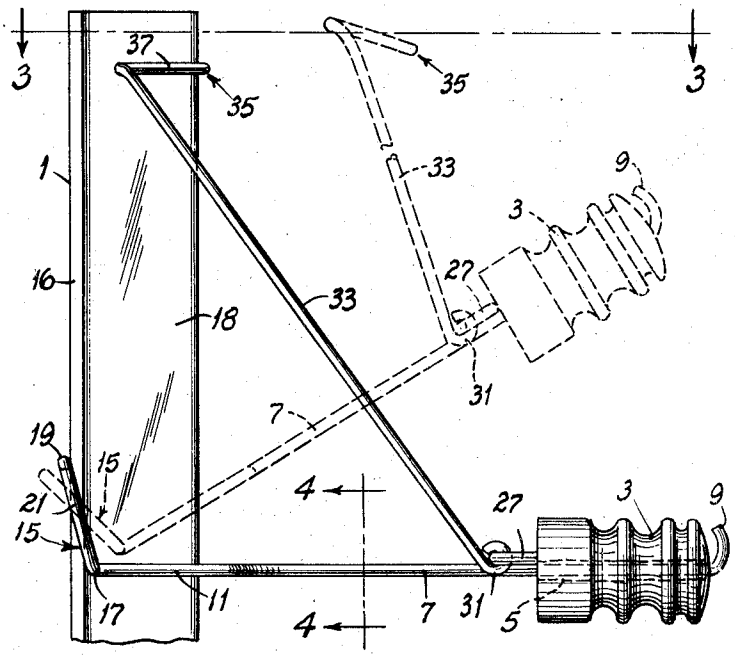


FIG. 4.

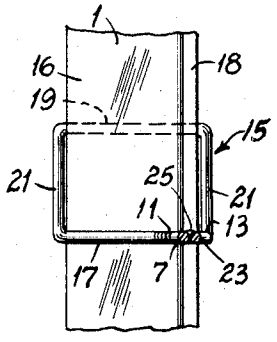


FIG. 6.

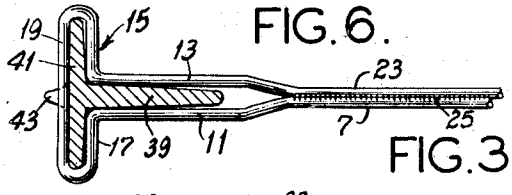


FIG. 3.

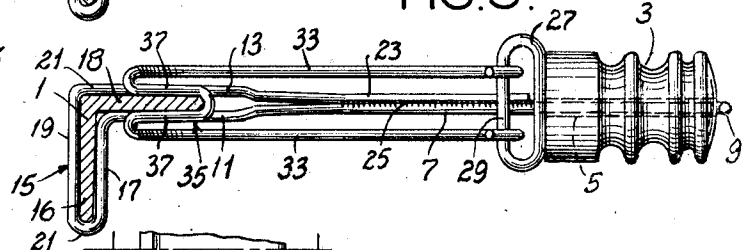
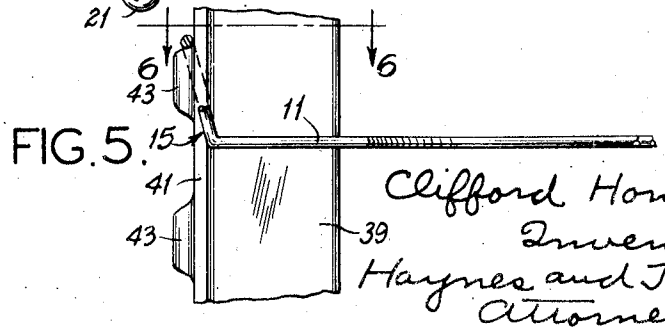


FIG. 5.



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INSULATOR SUPPORT

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4 Claims. (Cl. 248—205)

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This invention relates to insulator supports, and with regard to certain more specific features to such supports for stringing electric wires on metal fence posts.

Among the several objects of the invention may be noted the provision of a simple and economical insulator support which may easily be applied to standard steel fence posts and the like; the provision of a support of the class described which during or after initial application may conveniently and quickly be adjusted or readjusted to any desired elevation on the post; the provision of a device of the class described which may easily be locked into holding position and which when so locked becomes substantially rigid against all expected applied forces; and the provision of apparatus of this class which requires no special tools for application, adjustment or removal. Other objects will be in part obvious and in part pointed out hereinafter.

The invention accordingly comprises the elements and combinations of elements, features of construction, and arrangements of parts which will be exemplified in the structures hereinafter described, and the scope of the application of which will be indicated in the following claims.

In the accompanying drawings, in which are illustrated several of various possible embodiments of the invention,

Fig. 1 is a front elevation showing one form of the invention applied to a steel fence post of L-section;

Fig. 2 is a left-side elevation of Fig. 1, the dotted lines showing a position for applying, adjusting and removing the support;

Fig. 3 is a horizontal section taken on line 3—3 of Fig. 2;

Fig. 4 is a vertical section taken on line 4—4 of Fig. 2;

Fig. 5 is a fragmentary view similar to parts of Fig. 2, but showing an alternative form of the invention for application to steel posts having T-sections; and,

Fig. 6 is a horizontal section taken on line 6—6 of Fig. 5.

Similar reference characters indicate corresponding parts throughout the several views of the drawings.

It is common practice to use high voltage electric fence wire for confining cattle and the like within designated areas. The chief problem arising in connection with the use of such wire is its proper support upon insulators. In the case of wooden fence posts, such insulators may conveniently be mounted with the usual screw or nail fastenings. In the case of steel posts the application of said insulators has been extremely inconvenient and time consuming. Furthermore, once having been applied to steel posts, it has been difficult to readjust the elevations of the insulators for different wire elevations. For example, an electric wire for hogs needs to be closer to the ground than one for horses and cattle. Hence it is often desirable conveniently to make quick changes in the elevations of the insulators on the supporting posts. Another desirable feature is the ability quickly to apply, adjust and remove the insulators, yet have them rigidly held when installed.

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Referring now more particularly to Figs. 1–4, there is shown at numeral 1 a standard metal fence post having an ordinary angle or L-section. A standard insulator to be supported is shown at 3. This insulator has an axial hole therein, and is of spool form.

The support per se for the insulator comprises a length or leg section of wire 7 which passes through the opening 5 and is struck up as shown at 9 to hold the insulator captive. Included in the wire are spaced sections 11 and 13 for freely accommodating one flange of the L-section of post 1. These spaced sections 11 and 13 are joined by an upwardly tilted rectangular loop 15. The tilt on this loop 15 is such that when the wire 7 is horizontal, as indicated by solid lines in Figs. 1–4, the lower side 17 of the rectangular loop contacts the inside of one flange 16 of the fence post, while the upper side 19 of said rectangle contacts the outside of said flange 16. The space between the sides 21 of the rectangle 15 is such as freely to accommodate the flange 16. Hence when the device is placed in the dotted-line, angled position, such as shown in Fig. 2, it may easily be slipped either down or up on the fence post. When it is allowed to angle down to the solid-line position, the rectangle 15 acts as a snubber to hold the device against the force of gravity in the desired horizontal position on the post.

The form of the wire 7 is completed by a leg section 23 which by welding 25 is attached to the adjacent leg section 7. Other forms of attachment may be used at this point, for example, by twisting. Preferably leg section 23 does not pass through the hole in the insulator, although it might be made to do so.

While the parts so far described will hold up the insulator, they will not by themselves prevent it from being pushed up. In order to prevent this an eyelet 27 is welded on legs 7 and 23

just behind the insulator 3. This eyelet 27 provides a pintle 29 for eyes 31 formed in the ends of wire legs 33. The legs 33 are joined by means of an angled hairpin portion 35. The opposite legs 37 of the hairpin portion 35 are spaced so as springingly to engage the sides of one flange 18 of the fence post (see the solid lines in Figs. 1–3).

To apply the device to a steel fence post, it is placed in an angled position such as suggested by the dotted lines of Fig. 2, the rectangular loop 15 being brought down over the upper end of the post. Since under the angled position there is no snubbing action between the loop and the post, the device may be freely lowered to any desired elevation, as for example the one shown by the solid lines in Figs. 1 and 2. Then the wire 7 is angled down to the solid-line position, which causes the upper and lower sides 19 and 17 of the loop 15 to contact web 16 and to exert a snubbing action on the angle iron post. Portions 11 and 13 accommodate the other flange 18 of the angle iron post. Then the pivoted strut member constituted by the legs 33 is swung into the solid-line position, and the hairpin part 35 is frictionally engaged with the adjacent fence post flange 18. The loop end of the hairpin turn 35 contacts the edge of the flange and forms a positive stop. The members 33 then act as a compression member or strut positively preventing upward deflection of the insulator. The loop 15 acts as a snubber positively to prevent downward deflection of the lower parts 7 and 23 which act as a cantilever beam. The electric wire may then be strung upon the insulator 3 thus positioned.

At any time that it is desired to change the height of a line of insulators, it is necessary only to pull out the struts, thus relieving the frictional engagement at the hairpin turns 35. Then the device is pulled up to the dotted-line position shown in Fig. 2 and it may be raised or lowered and repositioned as described.

In Figs. 5 and 6 is shown a form of the invention for iron fence posts of T-section. The construction is similar and similar reference characters are used where applicable. In this case the spaced members 11 and 13 are placed at the center of the snubber rectangle 15. This orients all the extending parts of the structure centrally with respect to the post, instead of to one side, as in the first form. This is for the purpose of accommodating it to the central web 39 of the T-section fence post 41. Such posts are also standard. In addition they often carry a series of integral lugs 43 which may be engaged by the upper side 19 of the snubber loop 15, thus increasing the efficiency of the snubbing hold. Otherwise the construction and operation of this part of the invention are similar to the one already described.

It will be seen that the device may be economically constructed from wire of a suitable gage to provide the desired stiffness. For example, No. 8 or 9 Birmingham iron wire gage would be suitable.

In view of the above, it will be seen that the several objects of the invention are achieved and other advantageous results attained.

As many changes could be made in the above construction without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

I claim:

1. An insulator for fence posts having angled flanges, comprising a beam, snubber means on the beam allowing free axial application of the beam to the fence post by angling the beam upward but snubbing on the post when the beam is angled to a horizontal position, a strut pivoted to the beam and swingable toward the post, and means on the end of the said strut engageable with one flange of the post.

2. An insulator support for metal fence posts having angled flanges comprising a cantilever beam adapted to carry an insulator at one end thereof, a snubber loop carried on the other end of the beam and applicable to the fence post by angling the beam upward but snubbing on the post to limit the beam to a horizontal position when the latter is angled downward, a strut pivoted at its lower end to the beam and swingable upward toward the post, and means at the upper end of the strut frictionally engageable with the post to prevent upward angling of the beam in its snubbed horizontal position.

3. An insulator support for metal fence posts having angled flanges comprising a cantilever beam adapted to carry an insulator at one end thereof, a snubber loop carried on the other end of the beam and freely applicable to the fence post by angling the beam upward but snubbing on one flange of the post to limit the beam to a horizontal position when the latter is angled downward, a strut pivoted at its lower end to the beam and swingable upward toward the post, and hairpin loop means at the upper end of the strut frictionally engageable with the other flange of the post to prevent angling of the beam in its snubbed horizontal position.

4. A wire fence insulator support for application to steel fence posts having right-angled flanges, comprising a loop of wire having joined legs, at least one of which is adapted to extend through an insulator to form a cantilever beam support therefor with the insulator towards the end, the loop of wire at the other end of the cantilever support being formed as an essentially rectangular loop angularly located with respect to the beam for freely accommodating the other flanges of the post when the cantilever is angled but snubbing on one flange of the post when the cantilever is horizontal, a pintle connected with the cantilever near the insulator, a second loop of wire, the ends of which are formed as eyes for pivoting on said pintle, the opposite end of said second loop of wire being formed as an angular hairpin turn frictionally engageable with the other flange of the post.

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