April 28, 1959 I. STRAUSS 2,884,210

WIRE TWISTING TOOL

Filed Oct. 15, 1954

Fig. 1.

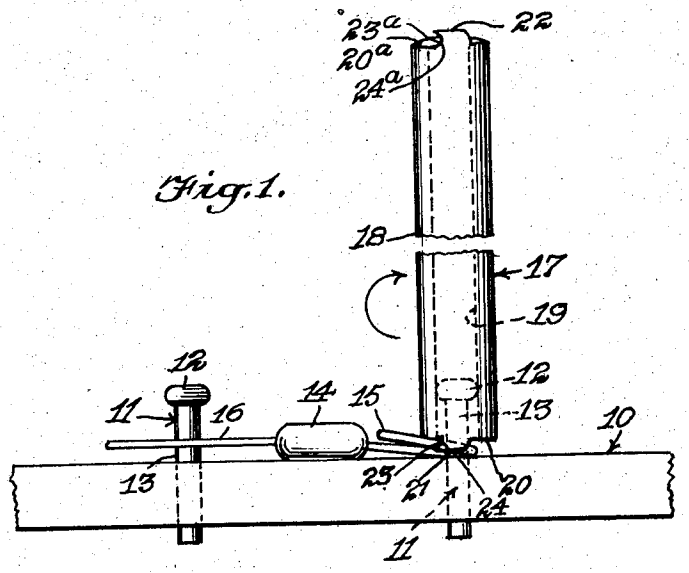


Fig. 2.

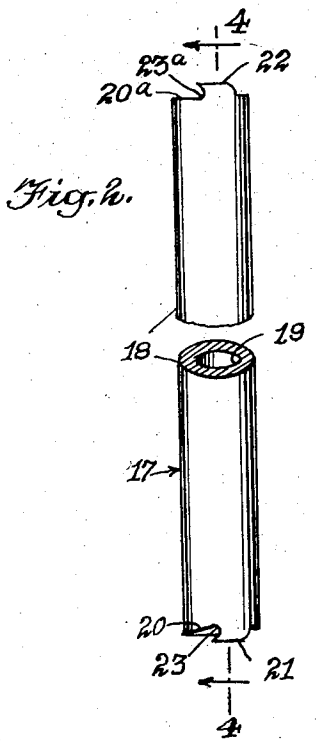
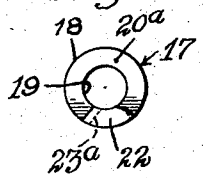


Fig. 3.



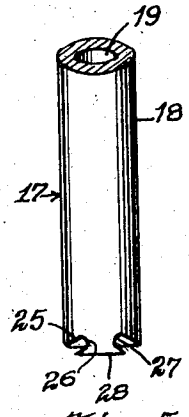
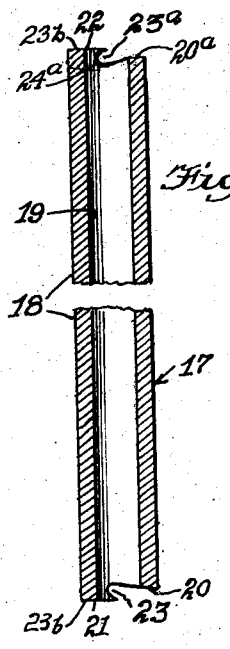


Fig. 5.

Fig. 4.



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WIRE TWISTING TOOL

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Application October 15, 1954, Serial No. 462,531

1 Claim. (Cl. 242—7)

This invention relates to a wire twisting tool and more particularly to a tool for looping and binding wires in place around a post for connection thereto.

Heretofore in twisting a lead wire from resistors, capacitors, or the like, around a post disposed on a board in the usual fashion, it has been the practice to twist them by hand, which procedure is time-consuming and rather expensive in labor costs. In addition, satisfactory results were not always obtainable in that many times the wire was not twisted tightly around the post. Further, when the posts on the board are close together, it is difficult to bind the wire properly thereon.

Various tools have been proposed for connecting wires to screws or the like which did not satisfactorily operate to closely bind the wire to the post and which made no provision for the necessary spiral winding of the wire around the post.

It is an object of the present invention to provide a wire twisting tool which will operate satisfactorily to twist a wire in close relation to a post and bind the same thereto.

It is a further object of the present invention to provide a wire twisting tool so constructed as to automatically provide spiral windings around the post with the operation of the tool.

Still another object of the present invention is to provide a wire twisting tool which will operate to twist the wire around the post in a counterclockwise or a clockwise direction as desired.

A feature of the present invention is the provision of a wire twisting tool for twisting wires around a post or the like which has all the desired advantages and which is nevertheless inexpensive to manufacture and easy to produce and use.

Other objects and advantages are set forth in greater detail in the accompanying specification taken in conjunction with the accompanying drawings, in which:

Fig. 1 is a side elevation of the wire twisting tool of the present invention in operation twisting the wire around a post located on a board;

Fig. 2 is a side elevation of the wire twisting tool of the present invention;

Fig. 3 is an end view of the wire twisting tool of the present invention;

Fig. 4 is a longitudinal section taken along the lines 4—4 of Fig. 2; and

Fig. 5 is a partially broken side elevation of a modified form of the wire twisting tool of the present invention.

Referring to the drawings, there is shown a board **10**. Posts **11** preferably extend through said board in spaced relation to each other, as shown. The posts are provided in the usual fashion with enlarged head portions **12** and a shank portion **13**. A resistor **14** having lead wires **15** and **16** is located on the board between two of the posts **11** with one of the lead wires adjacent the shank **13** of one of the posts while the other lead wire extends adjacent the shank of another of the posts.

While the unit to be connected to the posts has been shown as a resistor **14**, it will be understood that any other unit having lead wires to be connected to a post or the like may be utilized. In addition, while the resistor is shown as being connected to posts which are parallel to each other, it will be further understood that this connection may be made to posts which are diagonal to each other or at an angle to each other.

Heretofore the lead wires **15** were twisted around the shank of a post by hand which is a tedious and expensive undertaking. In accordance with the present invention, however, I have provided a tool **17** comprising a shank **18** which is adapted to be turned by manual movement. The tool is provided with a longitudinal bore **19** for the purposes hereinafter set forth. The tool has transverse faces **20** and **20***a* surrounding the bore and adapted to engage the wire **15**. At both ends of the tool **17** and extending longitudinally from the faces of the shank **18**, in accordance with the present invention, I have provided projections **21** and **22**. As shown, the bore **19** has a diameter and the projections **21** and **22** are so located that they may be spaced from the shank **13** of the post **11** a distance commensurate with the diameter of the wire **15** which is to be twisted. The height of the projections **21** and **22** is also substantially commensurate with the diameter of the wire **15**. In accordance with the present invention, therefore, the faces **20** and **20***a* of the shank are provided with reliefs **23** and **23***a* respectively adjacent sides **24** and **24***a* of the projections **21** and **22** respectively. The reliefs have outer faces **23***b* which extend parallel to the transverse faces **20** and **20***a*. The reliefs extend inwardly from these outer faces **23***b* toward the transverse faces **20** and **20***a*.

It is to be noted that the relief **23** is angularly disposed in one direction while the relief **23***a* on the other face **20***a* is angularly disposed in the other direction.

In using the efficient tool of the present invention it is only necessary to lay the wire **15** of the resistor **14** adjacent the shank **13** of the post **11**. Thereafter the tool **17** is placed over the post **11** with the longitudinal bore **19** of the tool receiving the head portion **12** of the post **11**. When this is done, the face **20** of the tool, for example, will engage the wire **15** and one face of the projection **21** will also engage the wire **15**.

The relief **23** is angularly disposed for clockwise movement of the tool and upon the turning of the tool the wire is given an initial twist around the post. Because of the construction of the tool with the relief **23** having the angular disposition described, I have found that during the twisting operation the tool in turning will carry each turn of the wire over the remainder thereof to automatically start a spiral configuration of the twist, as clearly shown in Fig. 1.

The relief **23***a* on the other face **20***a* of the tool is angularly disposed in an opposite direction and may be utilized completely satisfactorily for a counterclockwise twisting of the wire and providing an automatic spiral configuration of the twist. The projections **21** and **22** may be formed integral with the tool in the construction thereof, or, if desired, the projection may consist of a separate piece which is secured to the tool in its appropriate position by any suitable means.

In the modification shown in Fig. 5, in describing which the same reference characters will be utilized to the extent possible, there is shown a tool **17** having a shank **18** and a longitudinal bore **19**. At one end of the tool the face **25** is provided with reliefs **26** and **27** on either side of the projection **28**, as shown. The same construction is presented at the other end of the tool. With this construction I have found that a clockwise or counterclockwise twisting of the wire **15** around the shank **13** of the post **11** may be effected by the use of either

end of the tool. The turning of the tool in a clockwise direction will initiate a spiral winding of the twist in a clockwise direction, while a counterclockwise movement of the tool will initiate a spiral winding of the twist in a counterclockwise direction at the desire of the user.

It will be understood that while I have shown this triangular shaped relief and projection on both sides of the tool, it may be equally well utilized with the relief and projection located on only one end of the tool.

I have thus provided by the present invention a novel and efficient means for winding a wire around a post or the like which effectively binds the wire to the post and automatically initiates the desired spiral configuration therearound so that each twist of the wire does not overlap any other twist thereof.

While the invention has been described in some detail, it will be understood that variations and modifications may be made without departing from the spirit thereof or the scope of the appended claim.

I claim:

A tool for twisting wire comprising a shank, said shank having a cylindrical bore of a size adapted to receive a

wiring post, said bore opening outwardly of one end of said shank, said shank having a face extending transversely of said bore at said one end and surrounding said bore, a single projection integral with said shank extending transversely of said bore adjacent one side thereof and outwardly of said face, said projection defining a wall facing inwardly of said bore, means forming a relief in said projection opening inwardly of said wall with respect to said bore and extending laterally across said wall transversely of said bore from one side edge of said wall to the other, said relief also extending from the outer face of said projection with respect to the first mentioned face inwardly toward the latter face.

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