E. H. WILSON.

WIRE PROTECTOR.

APPLICATION FILED MAR. 23, 1918.

1,361,211.

Patented Dec. 7, 1920.

FIG. I.

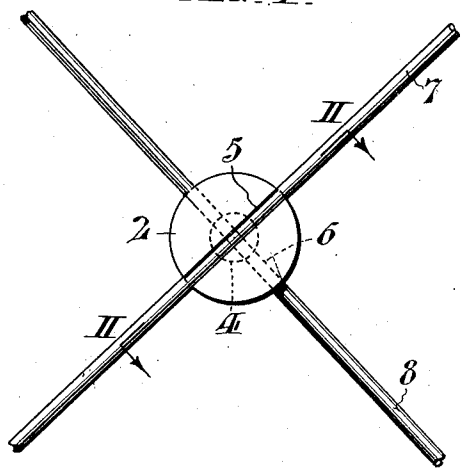


FIG. II.

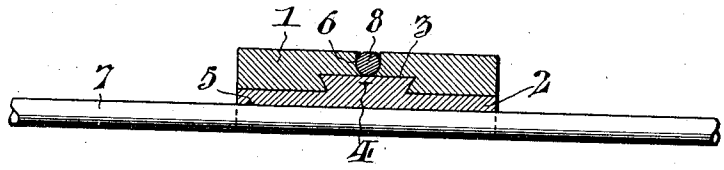


FIG. III.

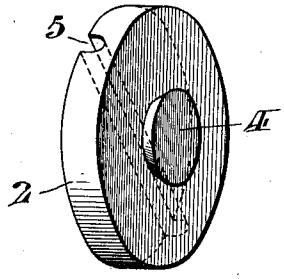
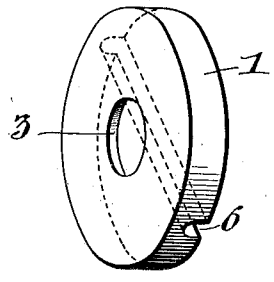


FIG. IV.



Witnesses

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WIRE-PROTECTOR.

1,361,211. Specification of Letters Patent. Patented Dec. 7, 1920.

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To all whom it may concern:

Be it known that I, EDGAR H. WILSON, a citizen of the United States, residing in Trenton, in the county of Mercer and State of New Jersey, have invented certain new and useful Improvements in Wire-Protectors, whereof the following is a specification, reference being had to the accompanying drawings.

The invention relates more particularly to improvements in wire protectors for crossing wires to prevent the chafing of one wire on the other, as for example, the crossing fuselage wires of an aeroplane.

An object of the invention is to provide a protector which is adapted to be attached to the crossing wires and which lies between the wires so as to maintain a position at the crossing point of the wires, and prevent one wire from chafing on the other.

A further object of the invention is to provide a wire protector of the above character which is made in sections, one of which is movable upon the other so as to readily adapt the protector to attachment to wires crossing at different angles.

These and other objects will in part be obvious, and will in part be hereinafter more fully disclosed.

In the drawings which show by way of illustration one embodiment of the invention, Figure I, is a side view showing two crossing wires with my improved wire protector attached to the crossing wires and lying between the same at the crossing point.

Fig. II, is a sectional view on the line II—II of Fig. I.

Figs. III, and IV, are perspective views of the two parts of the protector, said parts being detached and separated from each other.

It is well known that where two wires cross each other, and the wires lie substantially in the same plane, that one wire often chafes against the other wire until it is worn to a point of breaking. The present invention is directed to a protector which is adapted to be connected to the wires at the point of crossing and is connected to both wires so as to maintain its position at the crossing point even though one wire may shift its position relative to the other, and this protector is also so formed as to lie between the wires and prevent one wire from chafing the other. In the present embodiment of the invention, the protector is shown as formed in two parts, one of which is pivotally attached to the other, so that the protector may readily be applied to wires crossing at different angles, and so that the protector may permit the wires to have a free movement relative to each other.

Referring more in detail to the drawings, I have shown my protector as consisting of two disks 1, and 2, of rubber or similar material. The disk 1, is formed with a recess or pocket 3, while the disk 2, is formed with a projection 4. The projection 4, is preferably frusto-conical in shape with the base of the cone at the outer end of the projection. The recess 3, is also frusto-conical in shape with the base of the cone at the inner end of the recess. My protector is preferably made of rubber or some similar substance, and the projection 4, may be snapped into the recess and will pivotally connect and hold the two disks together, permitting one disk to turn freely on the other about the projection as a center. The disk 2, is formed with a diametrically disposed groove 5 in its outer side or face, while the disk 1, is formed with a similar diametrically disposed groove 6.

In Fig. I, of the drawing, I have shown two crossing wires indicated at 7, and 8. The protector is placed between the wires at the point of crossing. The wire 7, will lie in the groove 5, while the wire 8, will lie in the groove 6, the wires being frictionally engaged and retained by the yielding sides of the grooves. These grooves thus serve as a means for connecting the protector to the wires independently of the pivotal connection of the sections to one another. Inasmuch as one section of the protector can turn about the other section, the grooves may take any angle relative to each other, and, therefore, no matter what may be the angle of the crossing wires, the protector may be readily applied thereto. Furthermore, if the wires when under strain shift relative to each other, or if the angle between the wires is varied, the protector will at once shift along either wire to adapt itself to this shifting movement of the wires, or the sections will turn relatively to one another according to this angular movement of the wires. In other words, if the wire 7, moved transversely and in a direction endwise of the wire 8, the wire 8, would slip in its groove in the protector and on the other

hand, if the wires 7, and 8, should move so as to cross at an acute angle, then one section of the protector will pivot on the other section, and permit this shifting of the wires. No matter what position the wires may be in, the protector always remains at the crossing point and separates the wires so as to prevent one wire from chafing on the other.

While I have described my protector as made of rubber, or similar material, it will be understood that from the broad aspect of the invention it may be made of any suitable material which will maintain its position on the wires and prevent the wires from chafing, and thus being worn to a point of breaking. While I have described a specific way of connecting one section of the protector to the other, and also a specific way of connecting these sections to the wires it will be understood that this structure may be greatly varied without departing from the spirit of the invention, which consists primarily in the protector, which is connected to the wires in such a way as to always remain at the point of crossing and which will always lie between the wires so as to prevent one from chafing on the other. While I have also described my protector as used in connection with crossing wires of any character, it is especially adapted for use in connection with the fuselage wires of an aeroplane and may be readily applied to the wires and will prevent any possible chafing of one wire on the other.

Having thus described my invention, I claim:

1. A wire protector for connecting two crossing wires and preventing said wires from chafing one on the other, comprising two sections pivotally connected to each other, and means for connecting the sections to the respective wires so that the sections lie between the wires, said connecting means between the wires and the sections normally permitting said sections to freely move longitudinally of the wires.

2. A wire protector for connecting two crossing wires and preventing said wires from chafing one on the other, comprising two sections pivotally connected to each other, and having grooves on their outer faces lying in planes intersecting the pivotal axis of the sections, said grooves being adapted to freely receive the respective crossing wires and normally permitting movement of said sections longitudinally of the wires.

3. A wire protector for connecting crossing wires and preventing them from chafing on one another, comprising pivotally connected sections free to turn relative to one another and having at their outer sides means independent of the pivotal connection for so attaching the sections to the wires as to permit longitudinal shifting of the protector along either wire.

4. A wire protector for connecting crossing wires and preventing them from chafing on one another, comprising pivotally connected sections free to turn relative to one another having in their outer faces grooves with yielding sides adapted to receive and frictionally engage and retain the wires, so as to permit longitudinal shifting of the protector along either wire.

5. A wire protector comprising two rubber disks, means for pivotally connecting the disks, said disks having diametrically disposed grooves formed in their outer faces adapted to freely receive crossing wires, whereby said protector will lie between the wires.

6. A wire protector comprising two rubber disks, one of which is formed with a cone shaped recess, and the other with a cone shaped projection adapted to engage said recess and pivotally connect the disks, each disk having a diametrically disposed groove in its outer face.

In testimony whereof I have hereunto signed my name at Philadelphia, Pennsylvania, this twentieth day of March, 1918.

EDGAR H. WILSON.

Witnesses:

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