

March 1, 1932.

R. M. BROWNING
SPRING WIRE CONNECTER
Filed March 27, 1929

1,847,378

Fig. 1.

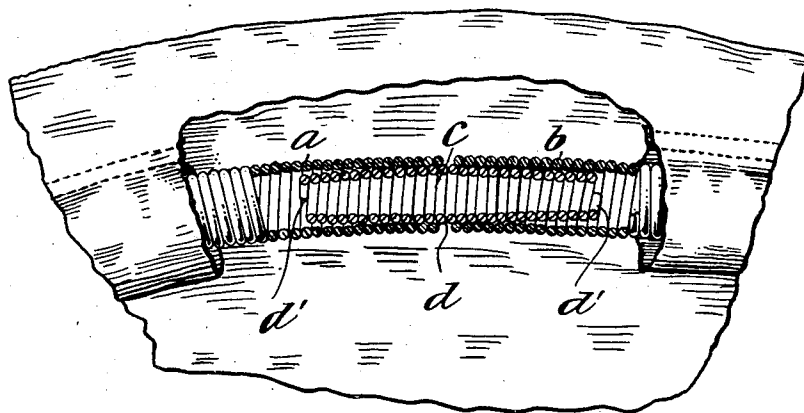
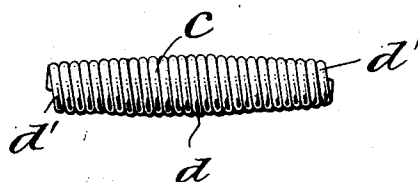


Fig. 2.



Inventor:

Roger M. Browning

By his Attorneys
Redding, Greeley, O'Shea & Campbell

UNITED STATES PATENT OFFICE

ROGER M. BROWNING, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO EDWARD C. BOWERS AND CHARLES L. FELDMAN, RECEIVERS FOR WICKWIRE SPENCER STEEL COMPANY, OF NEW YORK, N. Y., A CORPORATION OF MASSACHUSETTS

SPRING WIRE CONNECTER

Application filed March 27, 1929. Serial No. 350,276.

The present invention relates to connectors for spring wires and embodies, more specifically, an improved spring wire connector which may be applied to a standard spring of desired diameter without requiring a special construction thereof, particularly in the form of reduced diameters of the coils at one end of the spring in order to fit into the connector or other end thereof.

10 In connecting the ends of a coil spring, it has heretofore been necessary to provide either a special construction of one spring end or a connector which destroys the uniform diameter of the connected spring, or
15 characteristics which are desirable in such spring. For example, where one end is designed to fit into the other, the diameter of the coils of one end are reduced in order that they may be inserted into the other end. The difficulty in manufacturing a spring of this character is considerable, since the winding of the spring in different diameters is an expensive operation and requires the use of specially designed equipment. Other spring
20 connectors now available are of such character that the uniform flexibility of the spring is destroyed and a connector which does not present these disadvantages is highly desirable.

30 Accordingly, it is an object of this invention to provide a spring wire connector of such character that the uniform flexibility of the spring is preserved.

35 A further object of the invention is to provide a connector of the above character which is easily manufactured and capable of being applied to a standard form of spring without special instruments and without requiring reconstruction of the spring. It is proposed to include in a spring wire connector
40 of the above form, a construction which is strong and easily manufactured, at the same time being easily inserted in the ends of the spring to facilitate the connection of the ends thereof.

Further objects of the invention, not specifically enumerated above, will be apparent as it is described in greater detail in connection with the accompanying drawings, wherein:

Figure 1 is a view, partly broken away and in section, through the connected ends of a spring wire.

Figure 2 is a plan view of a spring wire connector constructed in accordance with the present invention.

Referring to the above drawings, a spring wire is shown in Figure 1 having ends *a* and *b*. These ends are of uniform diameter and are adapted to be juxtaposed to receive a spring wire connector *c* formed of a coiled spring having its greatest diameter at *d* and tapering extremities *d'*. These extremities are of less diameter than the diameter at *d* and permit the ends of the connector to be inserted within the ends *a* and *b* of the spring wire.

By threading the ends of the connector within the ends of the spring wire the convolutions of the former engage directly with the convolutions of the spring wire to form a connection of great strength. Forces tending to separate the connection cause the convolutions of the spring wire to engage those of the connector more tightly, thus preventing separation of the ends of the spring wire. Such forces not only tend to produce a separation of the coils of the spring wire but also those of the connector and, in this manner, the connection yields uniformly.

It will be apparent that the connector may be applied to the ends of any usual form of spring wire and that such ends need not be specially formed. The connector is easily manufactured in suitable sizes to engage the ends of standard forms of spring wires and although it has been shown as formed of reversely tapered portions of the type shown in the accompanying drawings, it is not to be

limited, save as defined in the appended claims.

I claim as my invention:

1. A device of the character described comprising a connector formed of a spring coil having its greatest diameter intermediate the ends thereof, and having convolutions tapering in diameter adjacent the ends thereof to engage a plurality of convolutions of a spring.
2. A device of the character described comprising a connector formed of convolutions and having its greatest diameter at its mid-section, the convolutions tapering off uniformly toward the ends of the connector to engage a plurality of convolutions of a spring.

This specification signed this 16 day of March, A. D. 1929.

ROGER M. BROWNING.