

(No Model.)

H. L. WEBB.
CONNECTOR.

No. 503,181.

Patented Aug. 15, 1893.

Fig. 1.

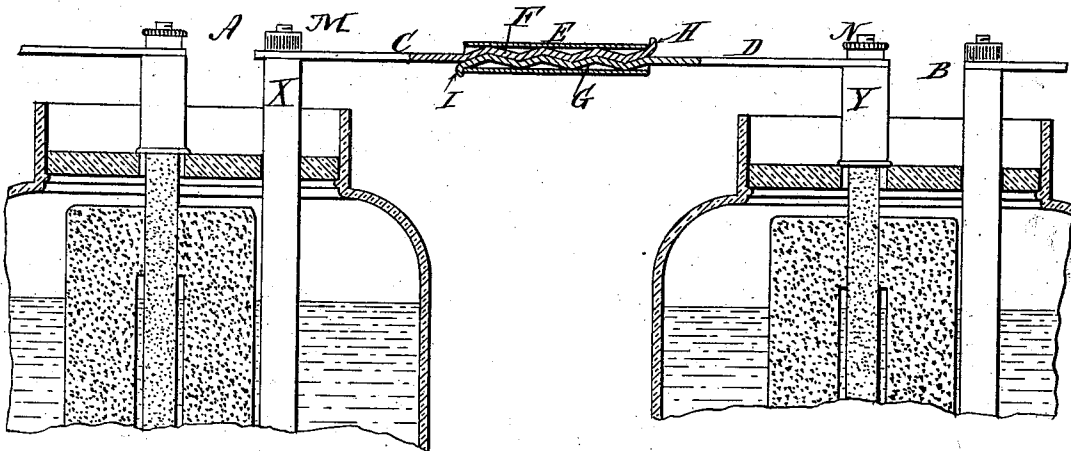


Fig. 2.

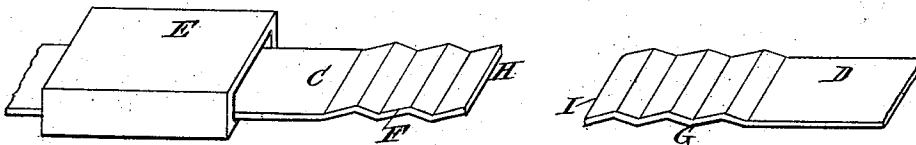


Fig. 3.

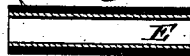


Fig. 4.



Fig. 5.

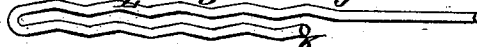


Fig. 6.



Witnesses:
O. B. Gardner
E. R. Knowles.

Inventor:
Herbert Lewis Webb.

UNITED STATES PATENT OFFICE.

HERBERT LAWS WEBB, OF NEW YORK, N. Y.

CONNECTOR.

SPECIFICATION forming part of Letters Patent No. 503,181, dated August 15, 1893.

Application filed February 28, 1891. Serial No. 383,326. (No model.)

To all whom it may concern:

Be it known that I, HERBERT LAWS WEBB, a subject of the Queen of Great Britain, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Connectors, of which the following is a specification.

My invention relates to improvements in means for joining or connecting the ends of wires or strips of metal together, and relates more particularly to the connection of electric conductors.

The object of my invention is to provide means whereby the joining of the ends can be quickly and easily made without the use of solder, screws and nuts, or twisting of the parts, and at the same time making a sufficiently perfect contact and union of the parts to insure the most desirable results.

To this end the invention consists in crimping or corrugating the two parts to be connected so that the crimps of one part will fit closely and snugly into the crimps of the other, and combining therewith a holding device which I term a "connector," and which consists of a tubular sleeve of suitable shape and internal diameter to receive and bind the crimped ends together within said sleeve, all as hereinafter more fully described.

In the accompanying drawings, in the several figures of which like parts are similarly designated; Figure 1 is a longitudinal-sectional view of my invention showing it applied to two electric conductors. Fig. 2 is a perspective view showing its application to metal strips, and with the strips detached but in condition to be connected. Fig. 3 is a longitudinal section of the sleeve, and showing it provided with insulating material. Figs. 4 and 5, are details illustrating modifications in shaping the wire ends to be connected. Fig. 6 is a longitudinal section of a modification, showing the sleeve crimped over the crimped wire ends.

In Fig. 1 of the drawings, I have shown my improvement applied to connect the terminals X and Y, of an electric battery the cells of which are represented by A and B. The conductors or wires C, D, which extend from the terminals X, Y, are attached thereto by suitable binding screws. M and N, are com-

posed of any suitable conducting material and preferably of non-oxidizable metal or alloy. The ends F, F, of these conductors are corrugated or crimped so that the crimps in one coincide or interlock with the crimps of the other, and the two parts are held in contact and against longitudinal movement by means of an inclosing and binding sleeve E, which is forced over the crimped ends of the conductors; the diameter of the sleeve being such as to closely confine the crimped ends in contact and securely lock the same in their proper conductive relation. As an additional safeguard against longitudinal movement, the free ends H, I, of the conductors are turned or bent up against the ends of the confining tube E.

In the modification shown at Fig. 3 the confining sleeve E is exteriorly provided with a wrapper composed of insulating material in order that where insulated conductors are employed and the insulation is removed to secure proper conductivity, the insulated wrapper of the sleeve re-establishes continuous insulation.

In the modifications shown at Figs. 4 and 5, Fig. 4, represents an ordinary wire having the end returned or bent back, and Fig. 5 is a view slightly in perspective of such wire crimped, so that such crimps can be located within and in conductive contact with the crimps of a flat metal conductor, and the object of returning or bending the wire back is to secure a greater surface of contact and at the same time avoiding any twisting or turning of such wire when in contact with the meeting end of a flat conductor.

In the views just described, namely: Figs. 4 and 5, J designates the wire; K, the returned end, and L the crimps.

In the modification shown in Fig. 6, the crimping operation is performed after the meeting ends of the wire have been covered by the binding sleeve E, and consequently the sleeve as well as the confined ends of the conductors is crimped simultaneously with the conductors; of course, when this is done the free ends will not be turned up as shown in Fig. 1. It will be seen that by the means described, the meeting ends of the conductors are securely and expeditiously connected in proper conductive relation, and that with

confining tubes or sleeves E, of the proper dimensions, no expert knowledge or special mechanical dexterity is required to secure the ends sought.

5 In performing the crimping operations, I prefer to employ a hand crimping tool or die of the construction described in a concurrent application, filed by me February 28, 1891, Serial No. 383,325.

10 What I claim as my invention, and desire to secure by Letters Patent, is—

1. A wire or strip coupling consisting of a metal sleeve in combination with the crimped or corrugated free ends of the wires or strips
15 to be joined, said corrugated ends being interlocked by overlapping, and held against lateral displacement by the surrounding sleeve, substantially as specified.

2. A wire or strip coupling consisting of a
20 metal sleeve in combination with the crimped or corrugated free ends of the wires or strips to be joined, said corrugated ends being interlocked by overlapping, and held against lateral displacement by the surrounding
25 sleeve, and means for the prevention of the

longitudinal displacement of the sleeve, substantially as specified.

3. A wire or strip coupling consisting of a sleeve inclosing the ends of the wires or strips
30 to be joined, the sleeve and inclosed wires or strips being crimped or corrugated, but not twisted whereby said wires or strips are bound tightly together in metallic contact with each other, and the sleeve caused to conform to the
35 external surface of said corrugated wires or strips, substantially as specified.

4. The combination of the crimped meeting ends of electric conductors, with an inclosing sleeve provided with an insulating covering, the said sleeve being adapted to hold the wire
40 or strips against lateral displacement, and itself prevented from being displaced longitudinally, substantially as specified.

Signed at New York, in the county of New York and State of New York, this 26th day
45 of February, A. D. 1891.

HERBERT LAWS WEBB.

Witnesses:

E. R. KNOWLES,
C. R. SEWELL.