(No Model.)

W. A. REDDICK.

WIRE JOINT.

No. 387,447. Patented Aug. 7, 1888.

Fig. 1.

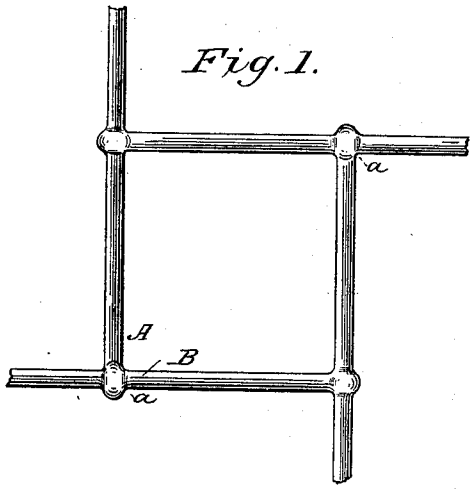


Fig. 2.

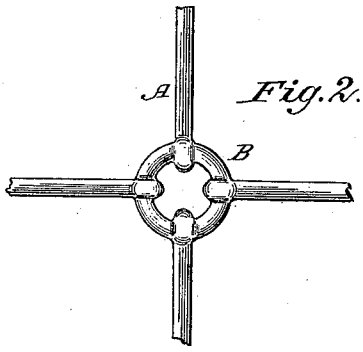


Fig. 3.

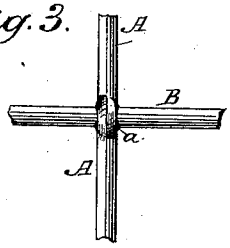


Fig. 4

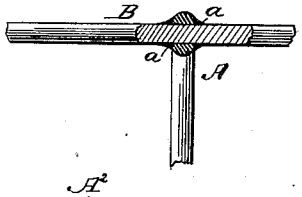
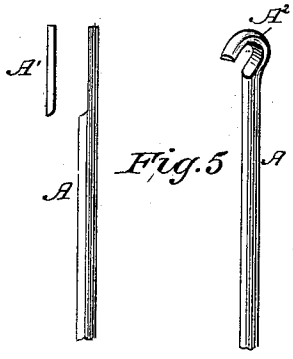


Fig. 5



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UNITED STATES PATENT OFFICE.

WILLIAM A. REDDICK, OF NILES, MICHIGAN.

WIRE-JOINT.

SPECIFICATION forming part of Letters Patent No. 387,447, dated August 7, 1888.

Application filed October 25, 1887. Serial No. 253,387. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. REDDICK, of Niles, in the county of Berrien and State of Michigan, have invented a new and useful Improvement in Wire-Joints, of which the following is a specification.

My invention is in the nature of a peculiar wire-joint, or joint for connecting sections of wire so as to construct thereof strong skeleton frames for various purposes—such as toy bedsteads, window and door gratings, and kitchen utensils, &c.; and it consists in a joint formed by cutting away one side of the end of the wire to or nearly to its middle line, then bending this reduced portion around another section of wire, with the flat face of the cut section next to the wire grasped thereby, and cementing these parts by tinning the joint by immersion of the article in a tinning-vat, as hereinafter fully described.

Figure 1 is a side view of one pattern of frame constructed with my improved joint. Fig. 2 is a side view of another pattern; Fig. 3, a side view of a modification of the joint. Fig. 4 is a sectional view of the joint, and Fig. 5 shows the blank-wire sections in different stages of formation before making the frame.

In forming the joint, the section A of the wire which is to form the eye that grasps the other section is by suitable dies bisected longitudinally for a short distance from its end, a piece, A′, Fig. 5, being completely cut out therefrom. An eye is then partially formed by bending this reduced end, as seen at A^2, in which the flat side forms the inner periphery of the eye. This eye is then bent around the other wire section, B, preferably at right angles, as in Fig. 4, and the eye is then made to closely clasp the section B with its flat side, which thereby forms a sleeve which stiffly holds the parts together. After the article is thus temporarily joined, the whole frame is dipped into a tinning-vat and the joints are solidly closed by a filling, *a*, of tin, which connects the parts as strongly as if they were homogeneously constructed of a single piece.

I am aware that it is not broadly new to tin wire articles after they are made, and that it is not broadly new to reduce the end of an article that is to have an eye formed on it. There is, however, a new result attained when a bisected wire is bent to form an eye around another section and then tinned, in that the joint is formed by a rigid sleeve which is longer than the diameter of the wire, (to the extent of tin filling *a*,) and this not only gives great strength and rigidity to the joint, but the joint does not look large and clumsy, as it does when a round (uncut) wire is bent around another. Furthermore, a very much less quantity of tin is required, as there is not the same open space in the joint to be filled by the tin, and the tin adheres better and does not run down and cool in unsightly drops.

In Fig. 3 is shown a modification of the invention in which a cross-joint is made, which makes one wire to appear to cross and extend beyond the other. In this case it is only necessary to cut the ends of the wire twice, one cut reducing the end to half its cross-section, and the other cut at right angles reducing it to one-quarter of its cross-section. The quartered ends are then bent into separate eyes that lie adjacent to each other, as in Fig. 3, and when tinned appear to form, and do in fact make, the same joint.

I do not limit myself to any size of wire, but may use it of such large cross-section as to constitute stout rods for window and door gratings, picket fences, &c. I may also use zinc or other metal for the superficial coating.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A wire frame having a rigid joint composed of two sections of wire, one having its end bisected longitudinally and the flat side thereof bent adjacent to and around the other section, and a cementing coat of molten metal applied over the whole, substantially as and for the purpose described.

The above specification of my invention signed by me in the presence of two subscribing witnesses.

WILLIAM A. REDDICK.

Witnesses:

EDWD. W. BYRN,

SOLON C. KEMON.