

No. 645,187.

Patented Mar. 13, 1900.

C. D. RICHMONDT.
WIRE CONDUIT TUBING.
(Application filed Nov. 20, 1899.)

(No Model.)

Fig. 2.

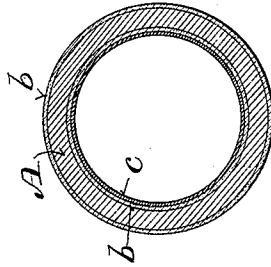
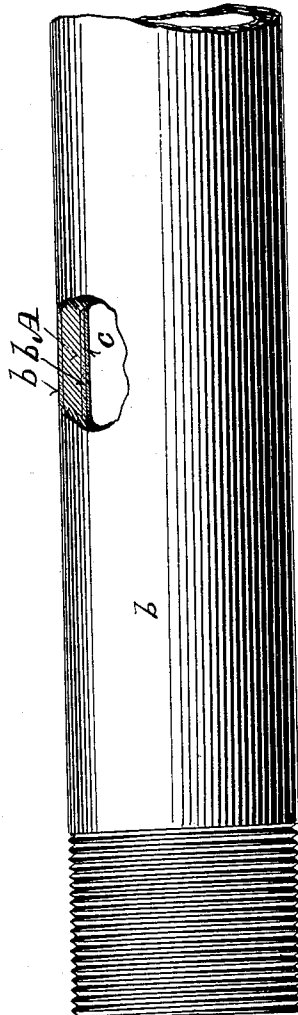


Fig. 1.



Inventor:

C. D. Richmond.

By H. G. Underwood
Attorney

Witnesses:
Geo. W. Young.
N. E. Diphant

UNITED STATES PATENT OFFICE.

CORDTLANDT D. RICHMONDT, OF MILWAUKEE, WISCONSIN.

WIRE-CONDUIT TUBING.

SPECIFICATION forming part of Letters Patent No. 645,187, dated March 13, 1900.

Application filed November 20, 1899. Serial No. 737,568. (No model.)

To all whom it may concern:

Be it known that I, CORDTLANDT D. RICHMONDT, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Wire-Conduit Tubing, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to increase the utility and efficiency of electrogalvanized iron or steel manufactures, especially tubing and tubular fittings for electrowire-conduits, said invention consisting in such a manufacture having a flexible coating superimposed on the zinc deposit, as hereinafter more particularly set forth with reference to the accompanying drawings and subsequently claimed.

Figure 1 of the drawings represents a side elevation of a partly-broken piece of electrogalvanized iron or steel tubing having an inner coating of flexible material superimposed on its primary coating of zinc, and Fig. 2 a transverse section of said tubing.

Referring by letter to the drawings, A indicates a piece of iron or steel tubing having an exterior and interior coating *b*, of zinc, deposited thereon by electrolytic process, electrogalvanizing having certain advantages over hot galvanizing and being preferable in many instances because of its smoothness. It is also known that electrogalvanizing extends into the pores of the metal, while hot galvanizing merely covers and is more expensive.

The electrogalvanized tubing is provided with an interior coating *c*, of flexible material, superimposed on its primary inner coating, of electrodeposited zinc, and while I have only shown an interior coating of said material said tubing may be provided with an exterior coating of the same, this protection being on the inside, outside, or both of the aforesaid tubing, according to the demands of the trade.

While I have shown and particularly described electrogalvanized iron or steel tubing having a flexible coating, my invention applies to fittings—such as bends, T's, &c.—for such tubing and to various other electrogalvanized iron and steel manufactures. The flexible coating may consist of boiled linseed-

oil in the proportion of three quarts to four ounces of true asphaltum, three ounces of Venice turpentine, two ounces of corn-oil, and six ounces of burnt umber mixed and boiled to form a product to which is added two ounces of dried and powdered gutta-percha dissolved in twelve ounces of boiled linseed-oil, the compound being then thinned with dissolved caoutchouc digested with oil of turpentine, the proportion of this thinning material being about one to two of said compound. If desired, a small proportion of sulfur or alum, or both, may be utilized in the gutta-percha and oil mixture. The preparation as a whole is baked on an electrogalvanized surface by subjection to a temperature of from 200° to 300° Fahrenheit, according to the degree of hardness desired, after which it is treated to a finish preparation having the proportion of about three pounds of heated manila copal, one and one-half pounds of gum sandarac, one-quarter pound of true asphaltum, a like quantity of lamp-black, and one gallon of boiled linseed-oil mixed with one gallon of turpentine in which one-half pound of caoutchouc has been dissolved, one pint of turpentine incorporated with at least ten per cent. of sulfur being added to the mixture. The finish preparation having been laid on the baked material, the coating as a whole is subjected to a partial vulcanizing process.

The coated electrogalvanized surface of the iron or steel manufacture is not only impervious to water, but it may be used in contact with various chemical agents without danger of corrosion, and it may also serve to insulate said manufactures from electric influences. Owing to the unity of the electrodeposited zinc and the iron or steel and the flexibility of the coating bending of the manufacture is not liable to cause fracture, blistering, or scaling of said coating, and in case of its possible abrasion said zinc remains intact to prevent said iron or steel from contact with moisture or other influences having a tendency to cause oxidation.

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

1. A manufacture of electrogalvanized iron

or steel having a flexible, non-corrosive and insulating coating adherent on the zinc.

2. An electrogalvanized iron or steel tubing having a flexible, non-corrosive and insulating coating adherent on the zinc.

5 In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in

the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

C. D. RICHMONDT.

Witnesses:

N. E. OLIPHANT,
B. C. ROLOFF.