

No. 817,086.

PATENTED APR. 3, 1906.

D. H. MURPHY.  
CONDUIT FOR ELECTRIC WIRES.  
APPLICATION FILED JUNE 9, 1902.

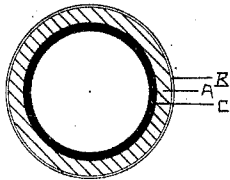


Fig. 2.

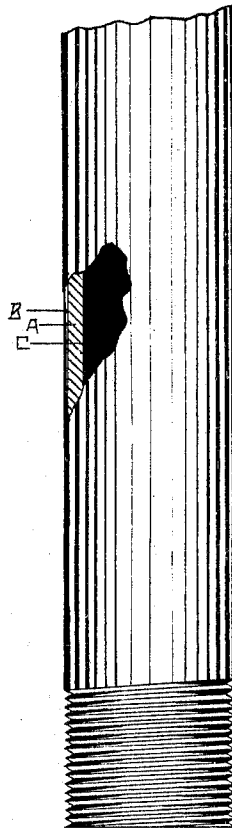


Fig. 1.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

DANIEL HAYES MURPHY, OF MILWAUKEE, WISCONSIN, ASSIGNOR TO  
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## CONDUIT FOR ELECTRIC WIRES.

No. 817,086.

Specification of Letters Patent.

Patented April 8, 1906.

Application filed June 9, 1902. Serial No. 110,719.

*To all whom it may concern:*

Be it known that I, DANIEL HAYES MURPHY, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Conduits for Electric Wires, of which the following is a specification.

The object of this invention is to increase the utility and efficiency of electrogalvanized conduit-tubing and tubular fittings, the invention consisting of a steel or iron tube coated externally by a deposit of zinc and internally by a flexible enamel, as hereinafter more particularly set forth with reference to the accompanying drawings, in which like letters designate the same parts in both figures.

Figure 1 is a side elevation of a partly-broken piece of steel or iron tubing having an outer coating of electrodeposited zinc and an inner elastic or flexible coating, and Fig. 2 is a transverse section of the tube.

Referring to the drawings, A indicates a piece of steel or iron tubing having an exterior coating B of zinc deposited by an electrolytic process and an interior coating C of flexible material.

In carrying out my invention I first clean the surface of the pipe, preferably by pickling and sand-blasting in the usual manner. After the pipe is thus prepared I apply a metallic coating to one surface, either by electrogalvanizing or any other desirable method. I then coat the other surface of the pipe with a flexible enamel composition. The metallic coating is applied to the outside of the pipe, and this enamel composition in the form of a liquid may be applied to the interior by pouring, forcing, or sucking the liquid through the pipe.

The elastic or flexible composition for the interior coating of the conduit may be made up as follows: One gallon heavy black varnish, one pint boiled linseed-oil, three pints turpentine. This preparation flowed over the inner surface, allowed to drain for a few hours, and then baked at a temperature of about 250° Fahrenheit for about three hours and a half will produce a smooth, tough, flexible coating which adheres perfectly to the metal.

After manufacturing electrogalvanized conduit-tubing for over a year under United States Patent No. 645,187, issued March 13, 1900, to Cordtlandt D. Richmond, I find that in order to make a satisfactory article of this kind suitable for an electric-wire conduit it is necessary to apply the inner flexible coating directly upon the bare iron or steel and not upon a primary coating of zinc. The flexible coating does not adhere well to zinc, and as it is often necessary to bend these conduits in fitting the coating is likely to be separated from the wall of the tube. On the other hand the coating will adhere perfectly to the iron or steel itself, and when applied in this way there is no danger of its parting from the iron or steel wall when the tube is bent.

The advantages of my invention result from the cheap simple method of obtaining a pipe with a metallic coating on one surface and a non-metallic coating on the other surface. Where the metallic coating is on the outside, it presents advantages in not being liable to cracking or breaking off in loading, unloading, and shipment and is not liable to be defaced during cutting the pipe to lengths. It also prevents corrosion. In such case the non-metallic coating on the interior gives a smooth polished surface, which prevents liability of stripping the insulation off the wires and affords a smooth raceway for fishing the wires through the conduit. It also acts as an insulator.

The metallic coating may be applied either before or after the applying of the non-metallic coating, and many other variations may be made in the manner of applying the coatings, as in preparing the pipe, &c., without departing from my invention.

I claim—

1. As a new article of manufacture, a metal pipe having a metallic coating on one surface and a flexible enamel coating applied directly to the other surface; substantially as described

2. As a new article of manufacture, a metal pipe having a metallic coating on its outer surface and a flexible enamel coating applied directly to its inner surface; substantially as described.

3. As a new article of manufacture, a

metal pipe having an electrogalvanized metallic coating on its outer surface and a flexible enamel coating applied directly to its inner surface; substantially as described.

- 5 4. A tube of iron, electroplated on the outside with zinc and having a flexible inside coating of enamel applied directly to the iron of the tube, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

D. HAYES MURPHY.

Witnesses:

O. C. PERLICK,  
F. W. JONES.