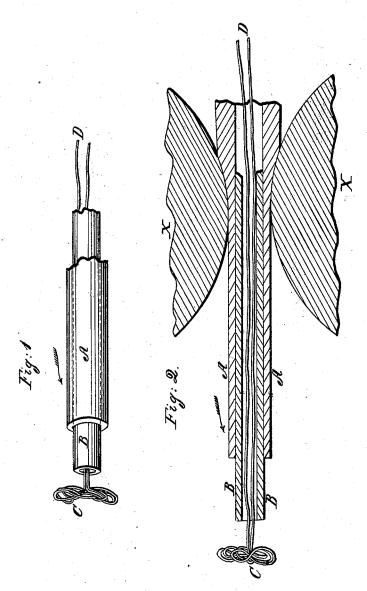
S. F. B. MORSE.

Telegraph Wire.

No. 3,316.

Patented Oct. 25, 1843.



Nitnesses.

Charles W Morse Sohn H Fitnul

Jam! F. B. Morse.

## United States Patent Office.

SAMUEL F. B. MORSE, OF NEW YORK, N. Y.

## METHOD OF INTRODUCING WIRE INTO METALLIC PIPES.

Specification forming part of Letters Patent No. 3,316, dated October 25, 1843.

To all whom it may concern:

Be it known that I, SAMUEL F. B. MORSE, of the city, county, and State of New York, have invented a new Method of Introducing Wire into Metallic Pipe; and I do hereby declare that the following is a full and exact description.

The nature of my invention consists in substituting a hollow mandrel for the solid mandrel used in making metallic pipe, which hollow mandrel I use for the purpose of introducing with facility wires of considerable lengths within said pipe. Iintroduce the wires through the hollow mandrel in two ways, to wit: first, when the pipe is made by rolling or pressing a metallic ingot upon the mandrel, the ingot being cold or heated to a temperature below 300° of Fahrenheit's thermometer, the wire or wires, coated with cotton or other substance liable to injury by a greater degree of heat, are directly introduced through the hollow mandrel and laid within the pipe as it is formed

and passes off from the mandrel; second, when the pipe is made from metal above the temperature of 300° of Fahrenheit's thermometer, or at a heat which would injure the coating of the wires, a single wire or metallic cord or chain is first introduced through the said hollow mandrel, and, being drawn within the pipe in the same manner as above described, furnishes the means, by attaching other wire or wires to one end of it, of drawing them within the pipe.

What I claim as my invention, and desire to

secure by Letters Patent, is—

The method of introducing wires in hollow pipes while making the same, by introducing the wires through a hollow mandrel on which the pipe is made, substantially as herein described.

SAML. F. B. MORSE.

Witnesses:

B. K. Morsell, C. W. Morse.