

UNITED STATES PATENT OFFICE.

SELAH HILER, OF NEW YORK, N. Y.

METHOD OF MAKING COPPER-COVERED IRON OR STEEL WIRE.

SPECIFICATION forming part of Letters Patent No. 248,860, dated November 1, 1881.

Application filed December 31, 1879.

To all whom it may concern:

Be it known that I, SELAH HILER, of the city and State of New York, have invented an Improvement in the Manufacture of Copper-Covered Steel Wire, of which the following is a specification.

In Letters Patent granted to me October 12, 1858, a method is described of coating iron or steel with metals—such as copper—by placing a tube in a mold and then casting into the same the iron or steel and drawing or rolling to form a wire.

My present invention is an improvement upon the aforesaid mode of making wire, whereby the copper-covered steel wire is made with greater facility.

I provide a tube of copper, which should be free from impurities, and a bar or ingot of steel of the proper relative weight to correspond with the wire when manufactured. The steel bar is to be of a size to pass freely into the copper tube. The surface of the steel bar is to be free from scale, and such bar is to be highly heated, so that it will roll and draw in the usual manner. The copper tube is also to be free from scale, especially upon the inside. After the steel bar has been heated the cop-

per tube, in a cold or moderately-heated condition, is slipped over the steel bar, and the two are passed through rollers and reduced down to the proper size in the manner now usual in making wire rods. Care, however, is to be taken to prevent the rollers producing any fin or projection upon the copper. The wire may be drawn through one or more draw-plates, if desired. The heated condition of the steel bar, when introduced into the copper tube, causes such copper to adhere and prevents the metal separating in the subsequent operations. Iron may take the place of steel, if desired.

I claim as my invention—

The herein-described improvement in the manufacture of copper-covered steel or iron wire, consisting in introducing a heated steel or iron bar into a copper tube and rolling and drawing the two metals into wire of the desired size, substantially as set forth.

Signed by me this 29th day of December, A. D. 1879.

SELAH HILER.

Witnesses:

HAROLD SERRELL,
GEO. T. PINCKNEY.