

UNITED STATES PATENT OFFICE

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METHOD OF MAKING LIQUOR FINISHED
WIRE

William E. Leonard, Worcester, Mass., assignor
to The American Steel and Wire Company of
New Jersey, a corporation of New Jersey

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1 Claim. (Cl. 29—148)

This invention relates to liquor finished wire, one of the objects being to produce such wire with an absolutely clean surface.

As is well known, the characteristic bright finish is imparted to such wire during its drawing. This is done by immersing it in a solution of a metallic salt after it has been drawn to within a few thousandths of an inch of its ultimate size. The wire is then drawn to size through a conventional reducing die, the metallic coating which has been deposited upon it due to its immersion in the metallic salt solution functioning to some extent as a lubricant, and the action of the die being relied upon to burnish this finish to its desired brightness.

In the days of slow drawing speeds, no other die lubricant was used. However, as modern production methods forced the use of faster drawing speeds it became necessary to use greasy lubricant. To the casual eye the resulting product still has its usual bright finish, but careful inspection reveals that there are usually slight traces of the die lubricant on its surface. In some cases the presence of this grease is not particularly objectionable, but in other cases it is extremely undesirable.

According to the present invention, wire is drawn completely to its ultimate or finished gage prior to its immersion in the finishing solution. It is then carefully cleaned and subjected to the action of the solution, it being understood that this is the usual solution of copper and/or tin sulphate. Then the wire is carefully burnished and dried in such manner that it is not contaminated by grease or other foreign substances. This burnishing may be done by drawing the wire through any device or devices which smooth

and polish its surface but do not effect any reduction. This wire will be found to have an absolutely clean surface, although it will be otherwise much like the usual liquor finished wire.

It is to be noted that the above is contrary to the usual practice. Since the introduction of this process it has undergone no change. The finishing solution has always been applied prior to the drawing, it being taken for granted that this was the best way. The present inventor's version of the step of applying the metallic coating, and his provision of the extra step of burnishing without relying upon the action of the wire drawing die, results in an entirely new and superior product.

Although not previously mentioned, it should be understood that the character of the finishing solution is varied in the usual manner to produce the color desired. That is to say, the proportioning of the tin and copper may be varied in the old manner, whereby the finish may vary from golden to silver. Furthermore, the previously mentioned drying may be done by wipers, heated air, etc., or natural evaporation may be relied upon alone. This drying is necessary because the cleaning of the finishing solution from the wire is usually done with a liquid such as water.

I claim:

A method of producing liquor finished ferrous wire, including drawing wire completely to its ultimate gage, then subjecting said wire to the action of a metallic salt solution of such character as to produce a coating of the color desired and subsequently burnishing without any reduction in said gage and drying said wire.

WILLIAM E. LEONARD.