J. H. MONK.

Tempering Skirt Wire.

No. 70,881. Patented Nov. 12, 1867.

Fig: 2

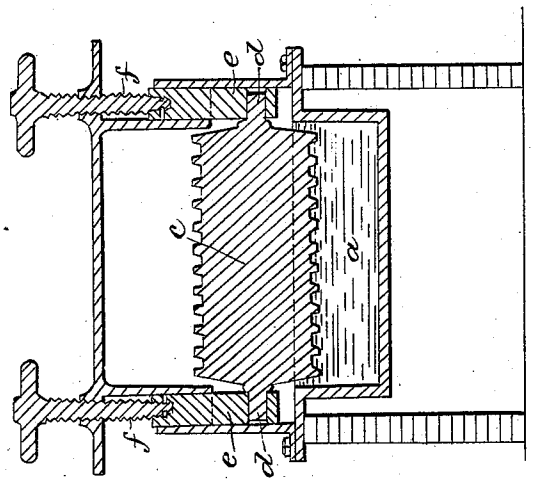
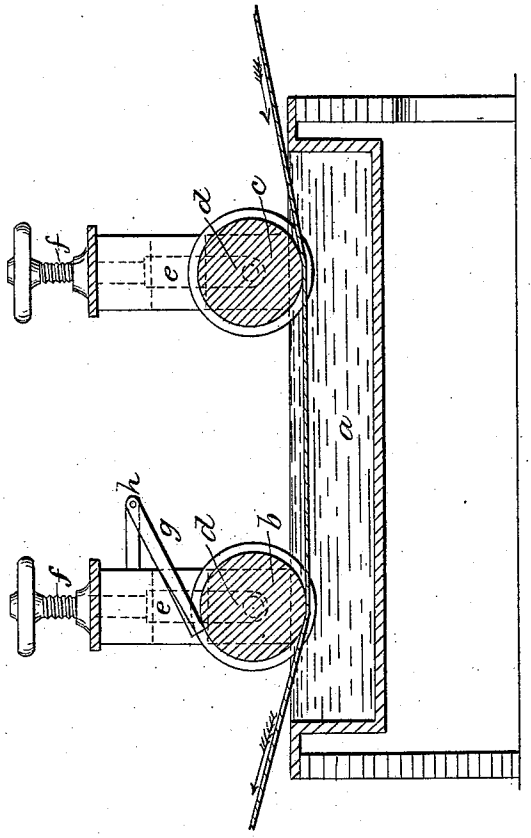


Fig: 1.



Witnesses.
Geo L Walker
Thos Geo Harold

Inventor
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N. PETERS. Photo-Lithographer, Washington, D. C.

United States Patent Office.

JOHN H. MONK, OF BROOKLYN, NEW YORK.

Letters Patent No. 70,881, *dated November* 12, 1867; *antedated November* 8, 1867.

IMPROVED MACHINE FOR TEMPERING SKIRT-WIRE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN H. MONK, of Brooklyn, E. D., in the county of Kings, and State of New York, have invented, made, and applied to use a certain new and useful improvement in Means for Tempering Skirt-Wire, &c.; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1 is a section longitudinally of the tempering-trough, and

Figure 2 is a transverse section of the same.

Similar marks of reference denote the same parts.

In tempering skirt-wire, it is usual to employ a bath of melted lead, across which two metal bars are placed, and the wire led beneath these bars. The constant rubbing of the wire as it is drawn along wears notches speedily in these bars, and when a join or inequality in the wire comes to such notch it is very liable to catch and be broken. Besides this, where a wider wire is drawn along in a place where a notch has been worn by a narrower wire, one edge enters such notch and the other does not, and a twist is given to the skirt-wire in tempering which renders a separate straightening operation indispensable. It also is important that the means for keeping the wire down into the melted metal be adjustable, in order that any variation in the depth of melted metal may be accommodated, and that the warping or twisting of the pot under the heat may be easily compensated, in order that the wire, in being drawn along, may be exposed to exactly the heat required.

The nature of my said invention consists in a pair of adjustable grooved rollers applied in such a manner to the bath of melted metal as to overcome all the difficulties aforesaid, and insure the perfect tempering of the skirt or other wire, as hereafter specified, the said rollers revolving by the contact of the wire.

In the drawing, *a* is the pot forming the tempering-bath, the same being properly set, and heated so as to fuse the tempering-metal. *b* and *c* are grooved rollers, each of which is set in bearings *d d*, that are within stationary slides *e e*, and are adjustable by screws *f f*. Each groove in the rollers *b* and *c* is wider than the widest skirt-wire that is to be tempered on the machine, and the rollers are placed near the ends of the bath, their lower sides being below the surface of the melted metal. The skirt-wire is drawn through the melted metal to temper the same, and the rollers *b* and *c* keep it down below the surface of the metal, and in a straight position between one roller and the other. The ends of the rollers being set in adjustable bearings, allow of their being raised or lowered, so as to immerse the wire to be tempered more or less below the surface, according to the amount of heating required in the tempering, and one end of the rollers may be immersed more than the others where two sizes or qualities of wire are being run through at the same time, the journals fitting loosely in the bearings to allow of this slight diagonal position of the rollers, so that they will revolve freely by the contact of the wire being tempered.

Several wires can be run through at the same time, and there is no liability for the wire to become caught or broken, and there is no stationary surface for the wire to run over, which would be worn into notches or grooves.

In order to keep the rollers free from dirt or any accumulation of dross, I make use of scrapers *g*, hung on the cross-shafts *h*, and by having a separate scraper to each groove they act much better in removing any obstructions, and if the obstruction is not removed by coming into contact with the scraper the first time, that scraper will rise and not lift the other scrapers.

What I claim, and desire to secure by Letters Patent, is—

A pair of grooved rollers, adjusted substantially as specified, in combination with the pot or bath for melted metal for tempering wire for skirts, &c., in the manner set forth.

In witness whereof I have hereunto set my signature this twentieth day of July, 1866.

J. H. MONK.

Witnesses:

GEO. D. WALKER,

THOS. GEO. HAROLD.