

(No Model.)

J. W. GRISWOLD.
PROCESS OF STRAIGHTENING WIRE.

No. 418,459.

Patented Dec. 31, 1889.

Fig. 1.

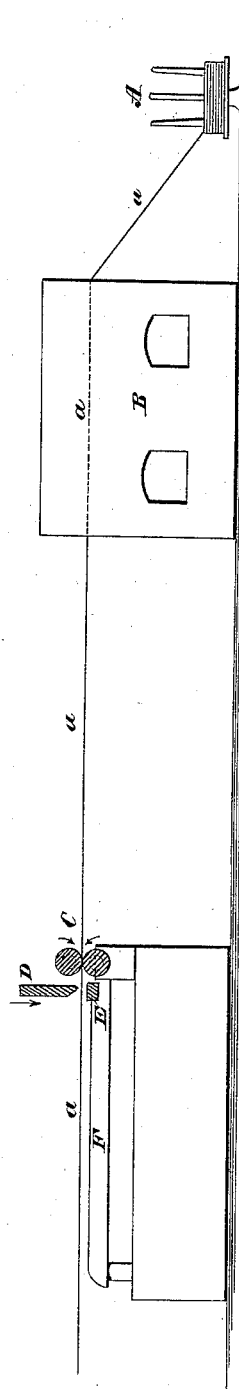
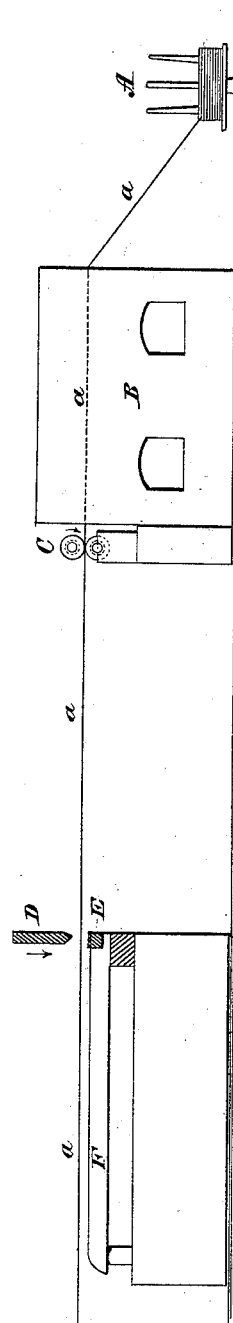


Fig. 2.



WITNESSES:

Gustave Dietrich.
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JOHN WOOL GRISWOLD, OF TROY, NEW YORK.

PROCESS OF STRAIGHTENING WIRE.

SPECIFICATION forming part of Letters Patent No. 418,459, dated December 31, 1889.

Application filed July 26, 1889. Serial No. 318,757. (No specimens.)

To all whom it may concern:

Be it known that I, JOHN WOOL GRISWOLD, of Troy, Rensselaer county, New York, have invented a new and useful Improvement in Processes of Straightening Wire, of which the following is a specification.

The operation of straightening wire has hitherto been done by means of special machinery, usually consisting of various arrangements of rolls, which press upon the wire as it is passed through them in such a way as to take out any crooks and curves which may be present or by stretching cold.

My invention consists in a process of straightening wire in which the use of such machinery is dispensed with.

The accompanying drawings illustrate diagrammatically one mode of carrying my process into practical effect, and represent a side elevation of the various instrumentalities.

Figure 1 shows the arrangement preferably employed, and Fig. 2 a modification thereof.

Similar letters of reference indicate like parts.

A reel of wire as it comes from the draw-bench is placed upon any suitable rotary support, as at A. The wire A is carried through a furnace B, and thence through a free air-space to the rolls C, or to any other mechanism for drawing the wire through said furnace. The rolls C are rotated by any suitable means, as a belt, in the direction of the arrows. In rear of the rolls is a knife D, which is reciprocated vertically by any suitable mechanism, so as to cut off the wire as it comes from the rolls into suitable lengths. A block or support E is disposed below the knife, and the wire as it is cut off into lengths is received upon a table F.

The furnace B may be of any suitable construction—as, for example, the type ordinarily employed in annealing wire—and the wire is

to be drawn through said furnace at such speed as will allow it to be brought therein to the usual annealing heat. During its passage through the furnace, and also through the cooling medium afforded by the free air-space outside of said furnace, the wire is to be maintained at such tension as will keep it straight. In practice I find that the ordinary friction of the wire in coming from the reel and in traversing the furnace acting against the pull of the rolls is sufficient for this purpose. The distance between rolls and furnace is to be such and the speed of the drawing-rolls is to be so regulated that the wire will have time to cool and set during the time of traverse of a given point thereon from furnace to knife. In setting, the wire takes the straight form which it naturally assumes under tension.

I may use any other cooling medium than a free air-space, and I may obviously allow said wire to cool while passing between the rolls and the knife, as in Fig. 2, instead of while passing between the furnace and the rolls, as in Fig. 1, the rolls in the former case, however, being disposed just outside the furnace and the knife at a distance therefrom, as shown in Fig. 2.

I claim—

The process of straightening wire which consists in continuously drawing a wire under tension, first, through a heating-chamber, and so heating said wire, and, second, through a cooling medium, as a free air-space, and allowing said wire to cool and set while traversing said medium, and then cutting said cooled wire without coiling into straight lengths, substantially as described.

JNO. WOOL GRISWOLD.

Witnesses:

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