B. A. Mason.

Wire Machine.

No. 112,944. Patented Mar. 21, 1871.

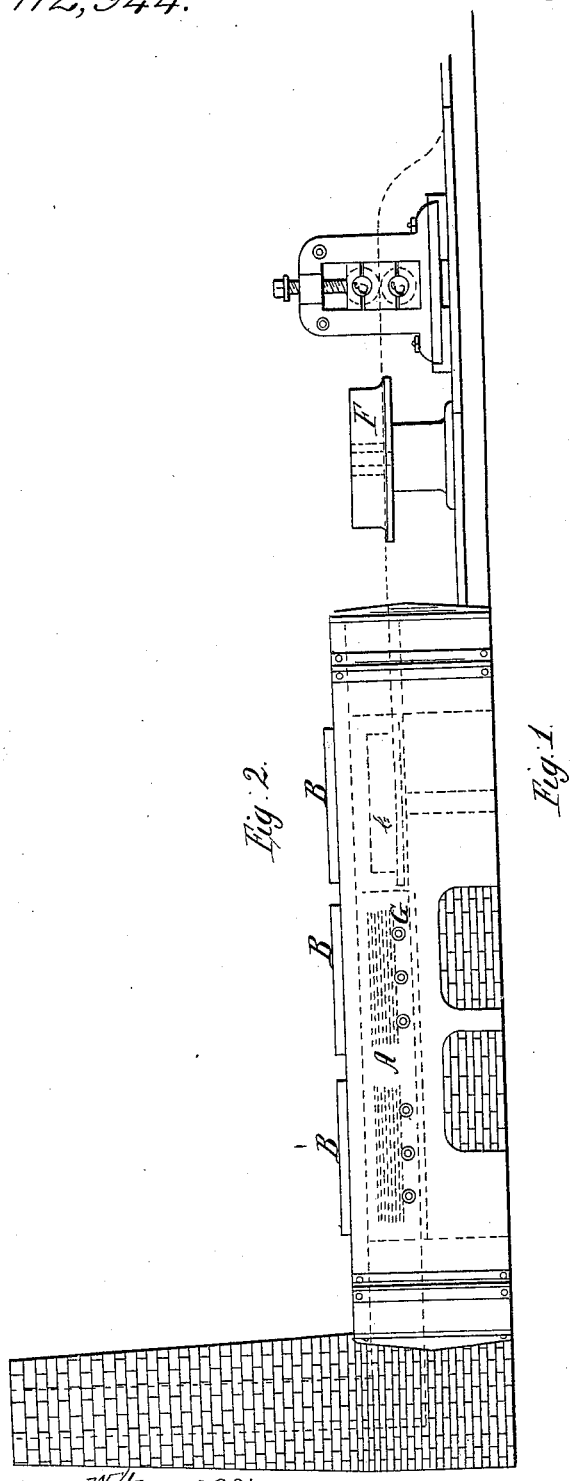

Fig. 2.

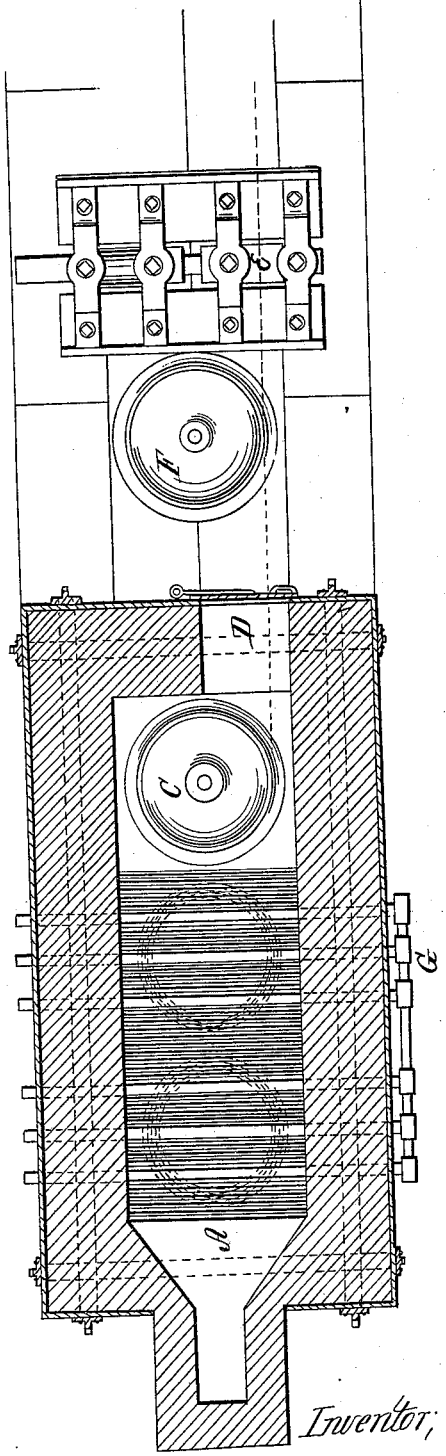

Fig. 1.

Witnesses;
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Chauncey W. Town

Inventor;
Benj. A. Mason

United States Patent Office.

BENJAMIN A. MASON, OF NEW YORK, N. Y., ASSIGNOR TO THOMAS L. CARPENTER, OF SAME PLACE.

Letters Patent No. 112,944, dated March 21, 1871.

IMPROVEMENT IN APPARATUS FOR MANUFACTURING 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, BENJAMIN A. MASON, of the city, county, and State of New York, have invented an Improved Apparatus for Manufacturing Wire; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification, in which—

Figure 1 is a plan view.

Figure 2 is an elevation of the furnace and machinery required for the purpose intended.

My plan of operation is to take coils of rods of any desired diameter, and place them in a furnace to be heated to a degree requisite for reducing them by rolling; when the desired heat is obtained, to place a coil upon a drum in the chamber of the furnace, and removed from the body of the fire, as shown at C, fig. 1; the end of the coil is then passed through the opening at D to the rolls E, the rotation of the latter drawing or unwinding the coil from the drum while they reduce the rod in diameter as desired. The object in placing the drum C in the chamber is to keep it as much as possible from the body of the fire, in which the coil is heated, and from which it is transferred to drum C to be delivered to the rolls.

When coils of large-size rods are heated I transfer them direct from the furnace to the drum or reel F in the outside, and between the furnace and the rolls E, to be unwound and reduced by the rolls, as above described.

Letter A, fig. 2, shows the furnace with circular covers to openings in the top B, for the introduction of the coil to be heated.

I do not limit myself to this mode of introducing the coil to the heat of the furnace, as other equally-convenient ways may be employed.

C is the drum within the furnace, to which the heated coil is transferred when desired, while D is the opening through which the end of the coil is passed to the rolls E.

F is the drum on the outside of the furnace, and placed in front of the rolls E, to be used in the same manner or purpose as the drum C, to receive and deliver the heated coil to the rolls E whenever it may be deemed best to transfer coils of certain size direct from the furnace to close proximity to the rolls.

The pipes G are for the purpose of keeping the coil to be heated from resting on the coal, and filled with running water to keep them from burning.

The advantage derived by the employment of the drums consists in delivering the coil to the rolls as fast as the drawing requires, free from being tangled, twisted, or in knots, while the mass of the coil retains its heat much longer than it would otherwise. At the same time a less rate of speed of the rolls will be requisite, whereby the wear and tear experienced in all attempts to reduce rods to a small diameter by rolls driven at a great speed will be obviated.

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

In combination with a drum or reel within the furnace, and the rolls, the drum or reel outside of the furnace between the latter and the rolls, substantially as described, and for the purpose set forth.

BENJ. A. MASON.

Witnesses:

CHAUNCEY W. TOWN,

THOS. L. CARPENTER.