

No. 747,779.

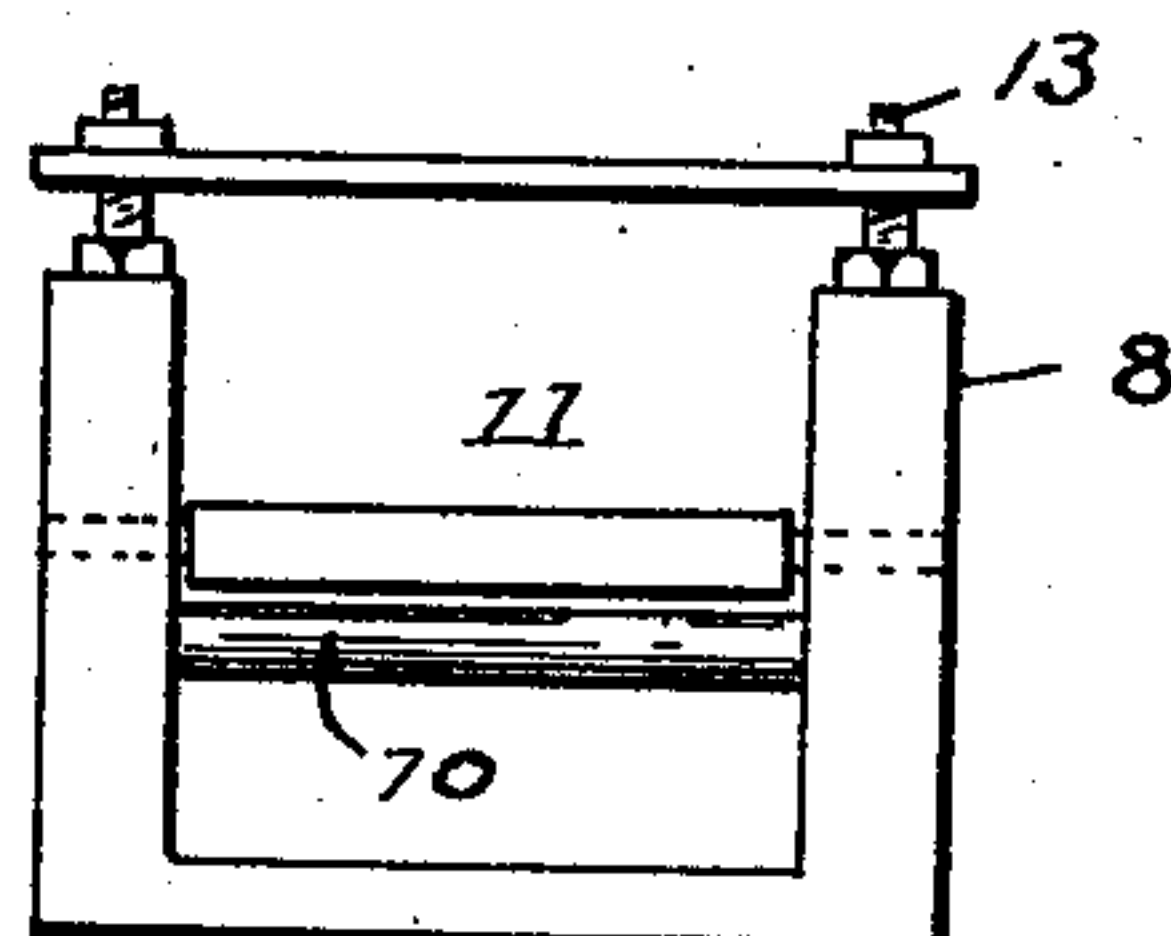
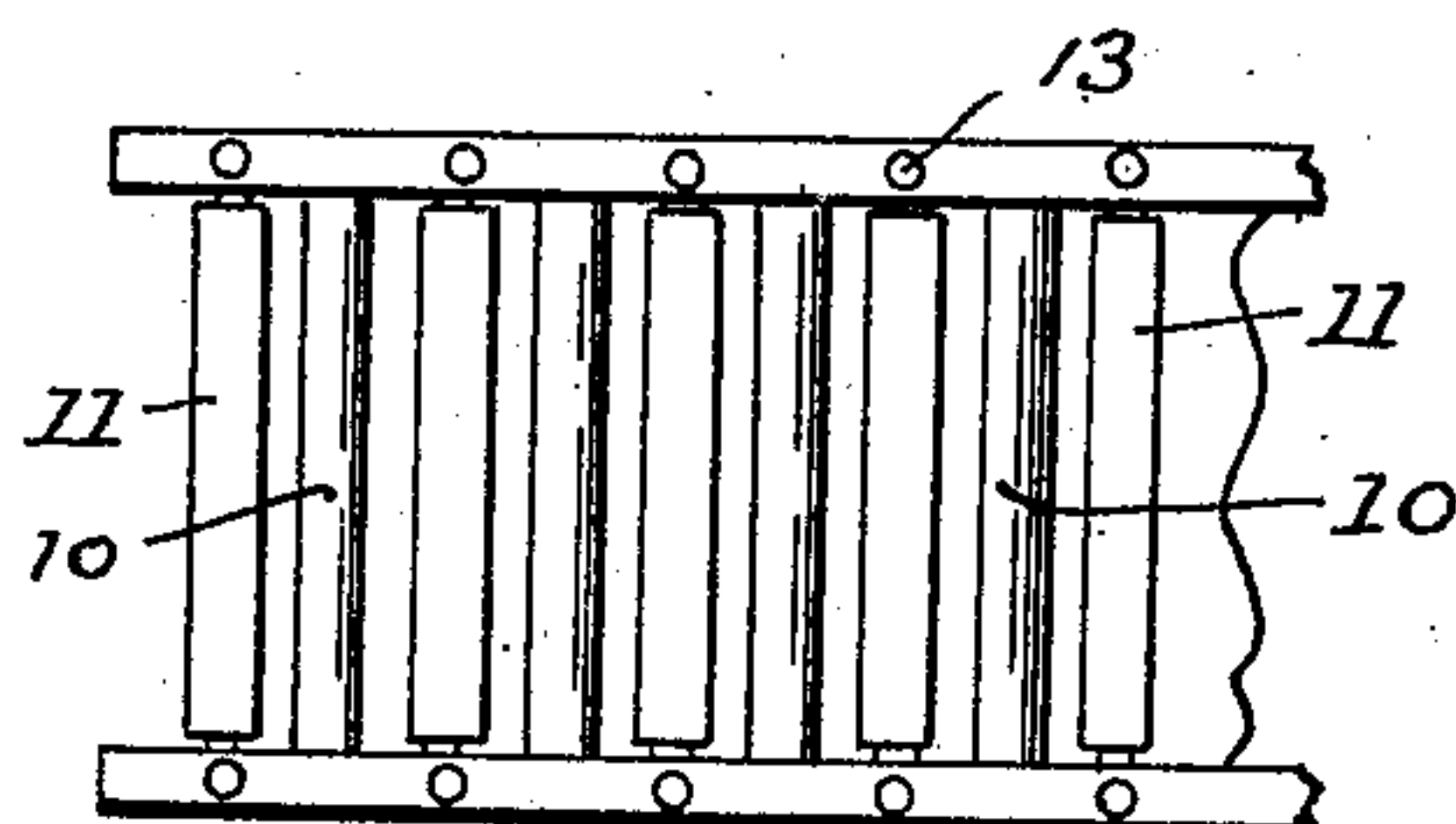
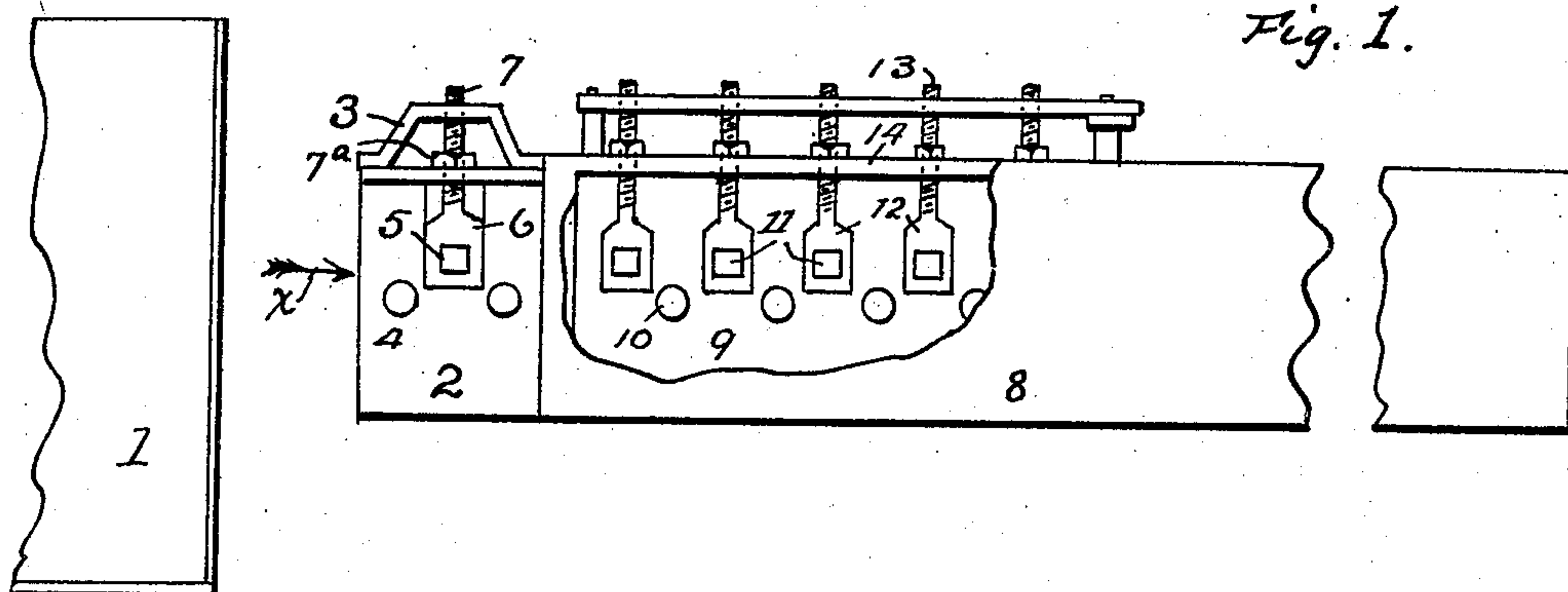
PATENTED DEC. 22, 1903.

M. J. RYAN.

STRAIGHTENING AND TEMPERING DEVICE.

APPLICATION FILED MAR. 16, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

MICHAEL J. RYAN, OF READING, PENNSYLVANIA.

STRAIGHTENING AND TEMPERING DEVICE.

SPECIFICATION forming part of Letters Patent No. 747,779, dated December 22, 1903.

Application filed March 16, 1903. Serial No. 147,957. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL J. RYAN, a citizen of the United States, residing at Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Straightening and Tempering Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in a combined straightening and tempering device, adapted more particularly for use on steel wire.

The object of the present invention is to provide a device whereby the wire is caught as it emerges from the furnace and it is passed through a preliminary straightening device and then into a secondary straightening device located inside a tank or trough containing oil, thus permitting the straightening and tempering of the wire simultaneously.

The invention is more fully described in the following specification and clearly illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation, partly in section, of my device. Fig. 2 is a plan view of the tempering-trough, and Fig. 3 is an end view of Fig. 1.

The furnace is indicated by the numeral 1, the straightening device being located in close proximity thereto, and 2 indicates the preliminary straightening device in which the initiatory action is accomplished.

3 is a frame located on the top edge of the box 2.

4 represents the lower cross-bars or straightening-bars, and 5 represents the upper straightening-bars. The bars 4 are permanently fixed in their proper positions, and the bars 5 are adjustable vertically, being mounted in housings 6, topped by screws 7, capable of being set by means of nuts 7^a thereon, and guided by the frame 3.

Immediately back of the box 2 and in direct communication therewith is located a secondary straightening device or combined straightening device and tempering-tank 8. This tank has a space 9 provided for the purpose of containing oil, by means of which the wire is tempered as it passes between the straightening-bars located therein.

The numeral 10 indicates the lower straightening-bars, corresponding with the bars 4 in the initial straightening-box 2, and 11 indicates the vertically-adjustable straightening-bars, corresponding with the bars 5 in the box 2. These bars 11 are in like manner adjustable through the housings 12, by which they are carried, and the screws 13, which pass through the guide-plates 14 along the upper edge of the tank 8.

The wire is fed into the preliminary straightening-box 2, as indicated by the arrow X, and passes alternately over one of the lower or fixed cross-bars 4 and under one of the adjustable cross-bars 5. It then passes into the tank 9 after being materially though not completely straightened, and it is here again engaged alternately by a fixed and adjustable cross-bar 10 and 11, and in this tank the wire passes through the volume of oil contained in the space 9, and the tempering thereof is accomplished while the straightening is being completed.

The device is comparatively simple in construction and is quite effective and rapid in operation.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

In a combined straightening and tempering device for wire, a preliminary straightening-box, a plurality of fixed cross-bars located therein, vertically-adjustable cross-bars above the fixed bars and alternately arranged therewith, and a framework secured to the top of the box for guiding the adjustable bars, a secondary box and tempering-tank adjoining the preliminary straightening-box, a plurality of fixed spaced bars secured therein, a plurality of adjustable bars above the fixed bars and alternately arranged therewith, and a framework secured to the top of the secondary box for guiding the adjustable bars, said tank being adapted to contain a liquid for immersing both sets of bars, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

MICHAEL J. RYAN.

Witnesses:

ED. A. KELP,
GEO. M. MILLER.