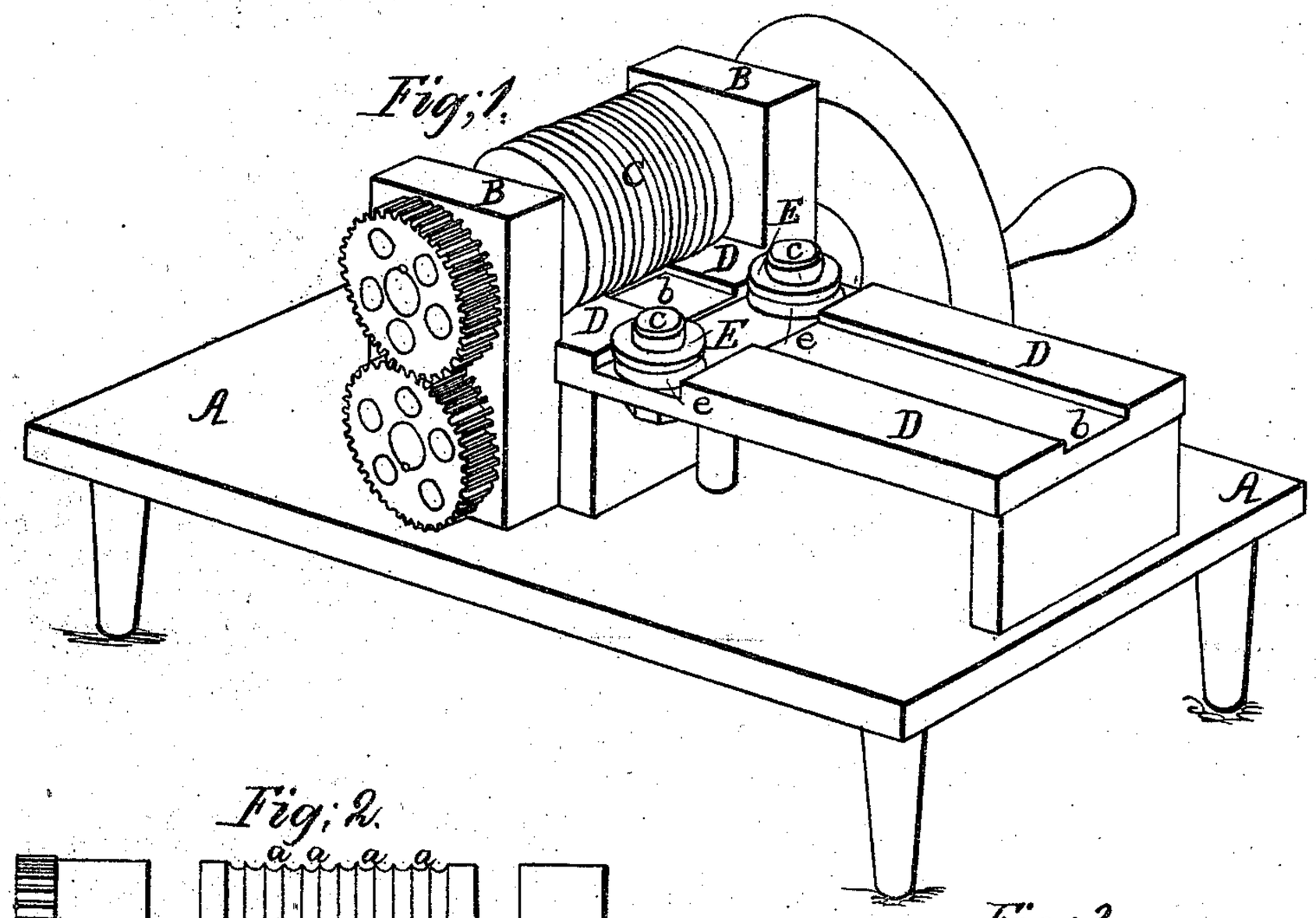
T. Fowler,

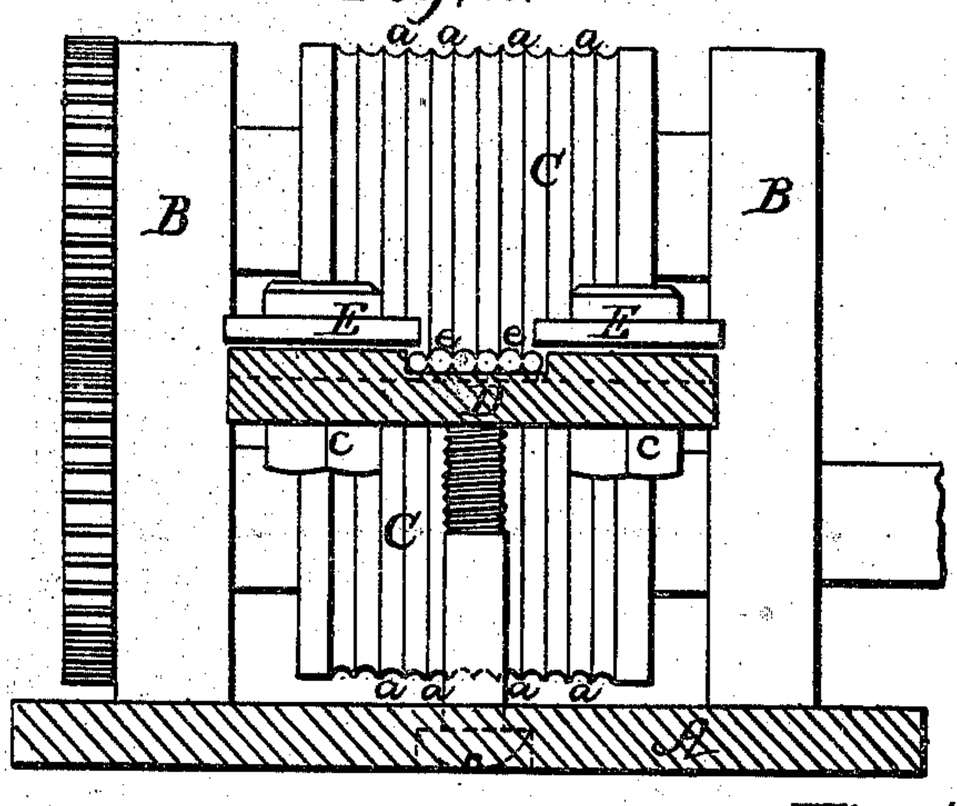
Wire Machine.

No. 87,557. Patented Mar. 9. 1869.

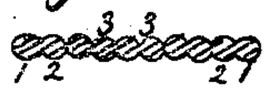
Fig; 1.



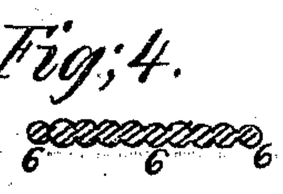
Fig; 2.



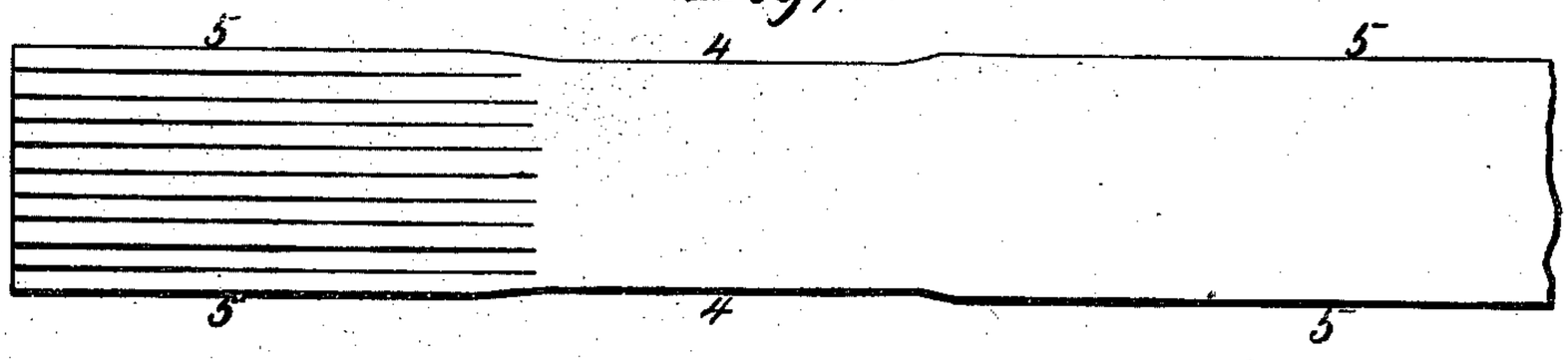
Fig; 3.



Fig; 4.



Fig; 5.



Witnesses.
J. E. M. Bowen.
Edmund Masson.

Inventor.
Thaddeus Fowler.
By atty A. B. Stoughton.

United States Patent Office.

THADDEUS FOWLER, OF SEYMOUR, CONNECTICUT.

Letters Patent No. 87,557, *dated March* 9, 1869.

MACHINE FOR MANUFACTURE OF WIRE STRIPS

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, THADDEUS FOWLER, of Seymour, in the county of New Haven, and State of Connecticut, have invented certain new and useful Improvements in Machines for Preparing Strips of Metal for the Manufacture of Wire; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a perspective view of the machine.

Figure 2 represents a vertical cross-section through the same.

Figures 3, 4, and 5, are illustrative of the difficulty heretofore encountered in preparing and creasing strips for the manufacture of wire, and of the means essayed for avoiding that difficulty.

Similar letters of reference, where they occur in the separate figures, denote like parts in all of the drawings.

In the manufacture of wire from strips, as practised by me, it was found that the outside wires of the strip, (always one on each side, and sometimes two on each side,) were so slack of metal as to be comparatively worthless for round wire, and could only be used where a perfect form of cross-section was not material, as, for instance, in telegraph-wires.

The object and purpose of my invention was to avoid this loss, or waste, of the outside wires, and I have accomplished it, as will be hereinafter explained.

My invention consists in combining, with a pair of creasing-rollers, a guiding-table and a pair of compressing-rollers, whose axes are at right angles to the axes of the creasing-rollers, so that, as the strip is fed up to, or before it is fed up to the creasing-rollers, its edges shall be compressed, or "fulled up," sufficient to supply the deficiency of metal at the edges, when it has passed through between the creasing-rollers.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

In or on the base, A, is placed a housing, or pillar-blocks, B, in which a pair of creasing-rollers, C C, is hung, and rotated by any suitable power and mechanism.

The creases *à a a*, &c., in these rollers, are semicircular, so as to form, where they pinch, or roll together, a series of circular grooves.

On the base, A, is also arranged a feeding-table, D, having a groove, *b*, therein, wide enough to receive and guide the strip of metal to be operated upon.

In or on the table D, there are arranged two compressing, or fulling-rollers, E E, whose axes, *c c*, are at right angles to the axes of the creasing-rollers C C.

The perimeters of the compressing-rollers are slightly grooved and rounded at *e*, and project slightly beyond the edges or walls of the groove *b*, in the table, and the compressing-rollers E are, moreover, let down into the table, so that their perimeters will bear or take against the edges of the strip of metal, as it is drawn or fed past or between them, and full, or thicken them up, while the gauge of the central portion of the plate is not changed.

When the plate is not fulled up at the edges, the wires made therefrom are slack, or flat at the edges, as seen at 1–2, while those, 3, in the central portion of the plate are perfectly round. This flattened condition is due to the spread of the metal under the pressure of the rolls, and it must go to the edges, of course.

By thickening up the edges of the strip, as shown at 4–4, fig. 5, and then creasing it into incipient wires, it again spreads out to its original width, as seen at 5, same figure, and the wires made therefrom are all, even to the extreme outer ones, perfectly round, as shown at 6, fig. 4.

The compressing-rollers E, after they have fulled up the edges of the plate, become, to a great extent, if not entirely, the directors of the plate, or strip, beyond that point, and up to where it enters between the creasing-rollers.

The plate, or strip, as will be observed at fig. 5, is compressed and contracted, as at 4, but, after passing under or between the creasing-rollers, it is again spread out to its original width, by the pressure of the rollers.

Having thus fully described my invention,

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

In combination with a pair of creasing-rollers and a guiding-table, a pair of compressing-rollers, for thickening up the edges of the strip, preparatory to its being creased, or cut into wires, substantially as and for the purpose described.

THADDEUS FOWLER.

Witnesses:

A. B. STOUGHTON,

EDMUND MASSON.