

F. Roys,
Seaming Sheet-Metal.

N^o 42,966.

Patented May 31, 1864.

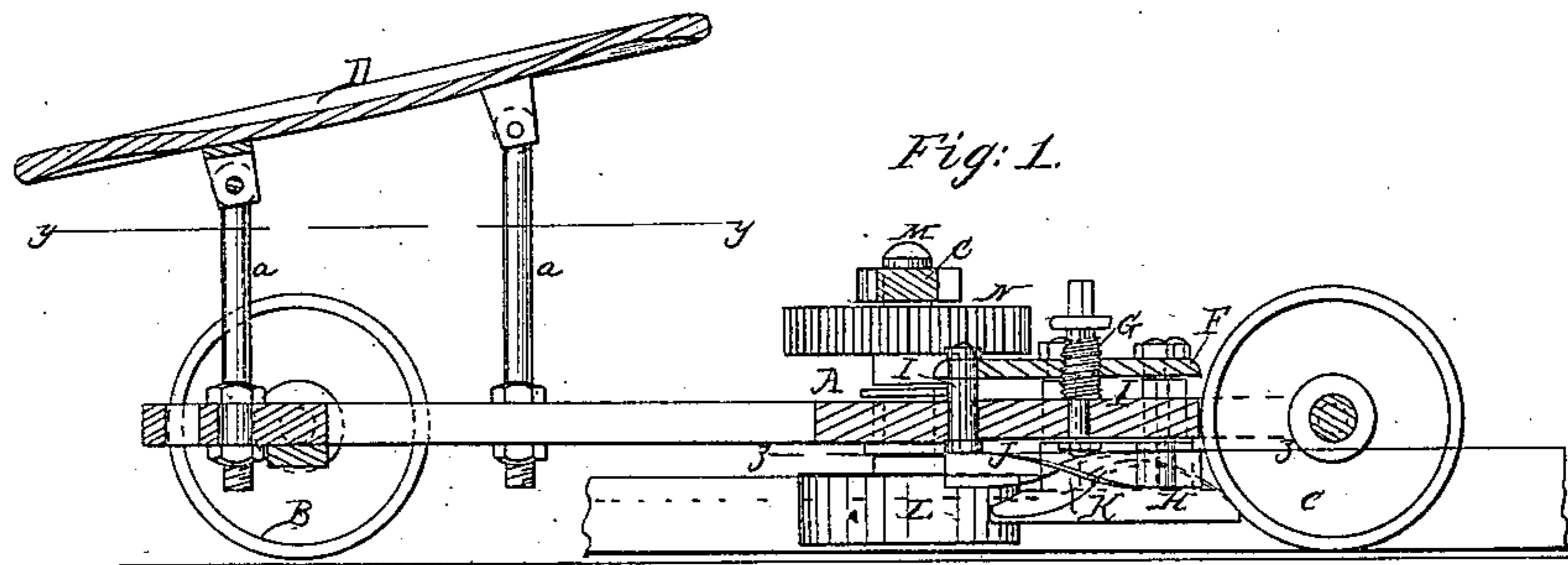


Fig. 2.

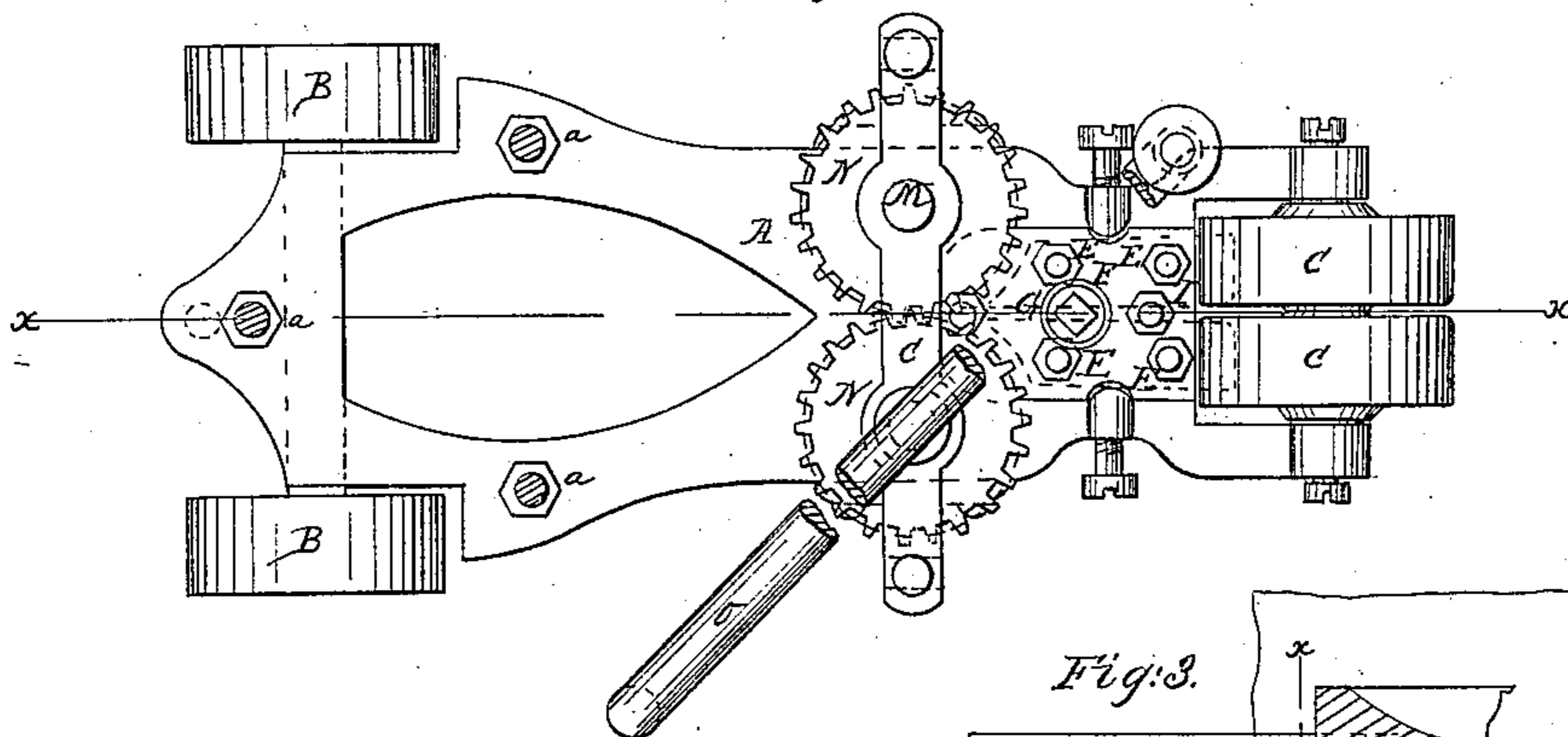


Fig. 3.

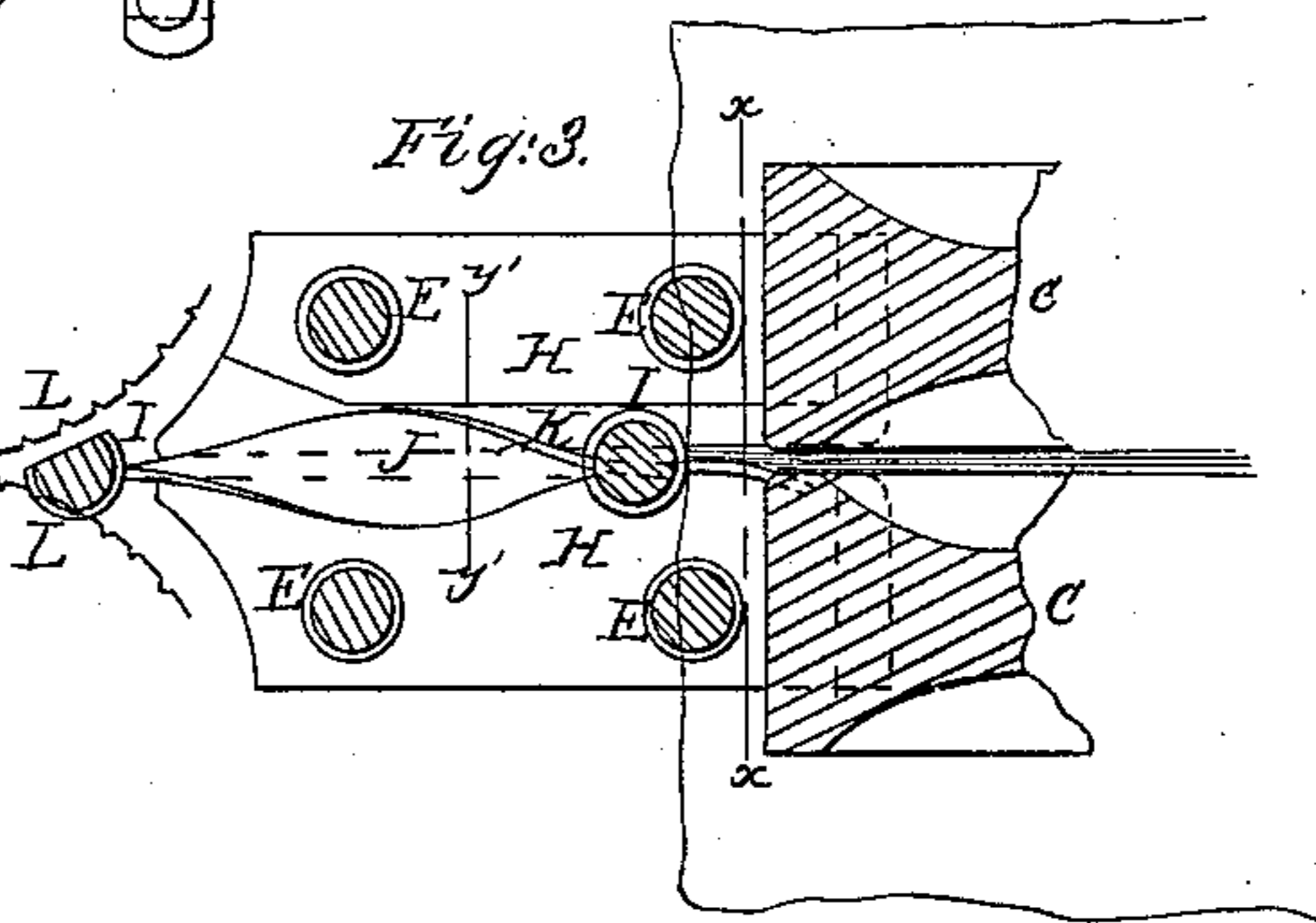


Fig. 4.

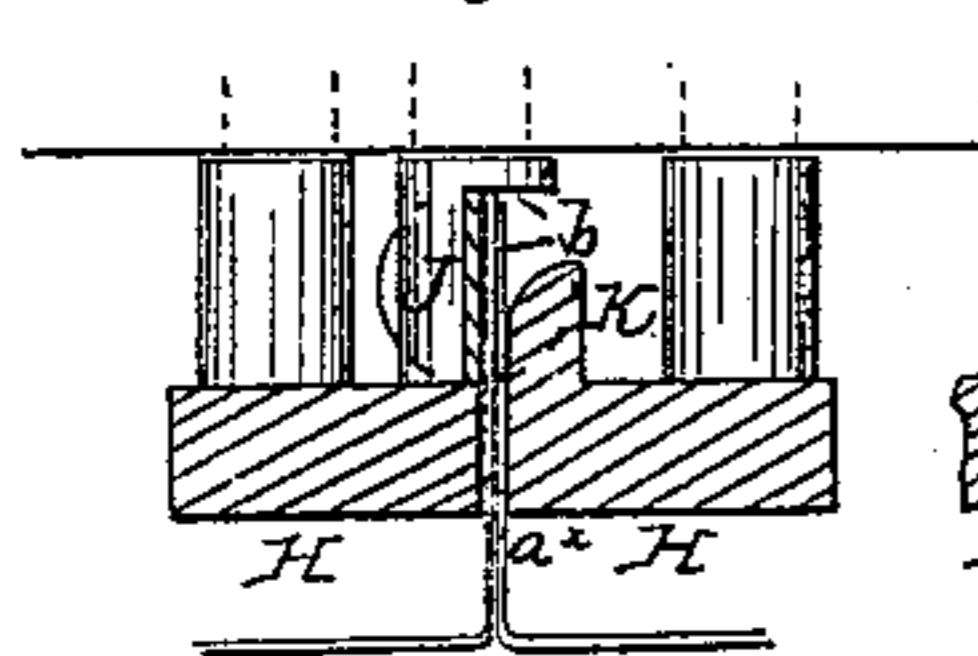


Fig. 5.

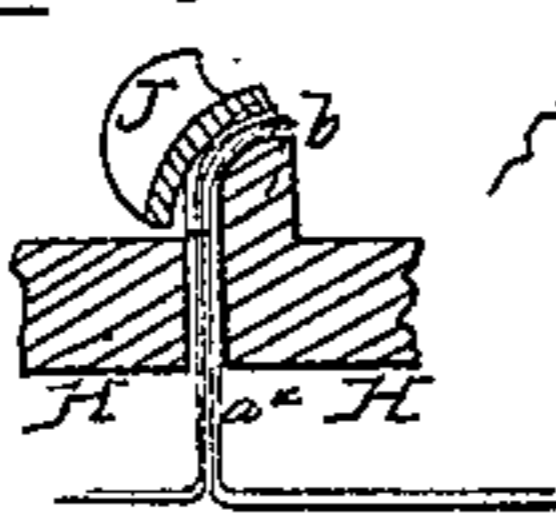
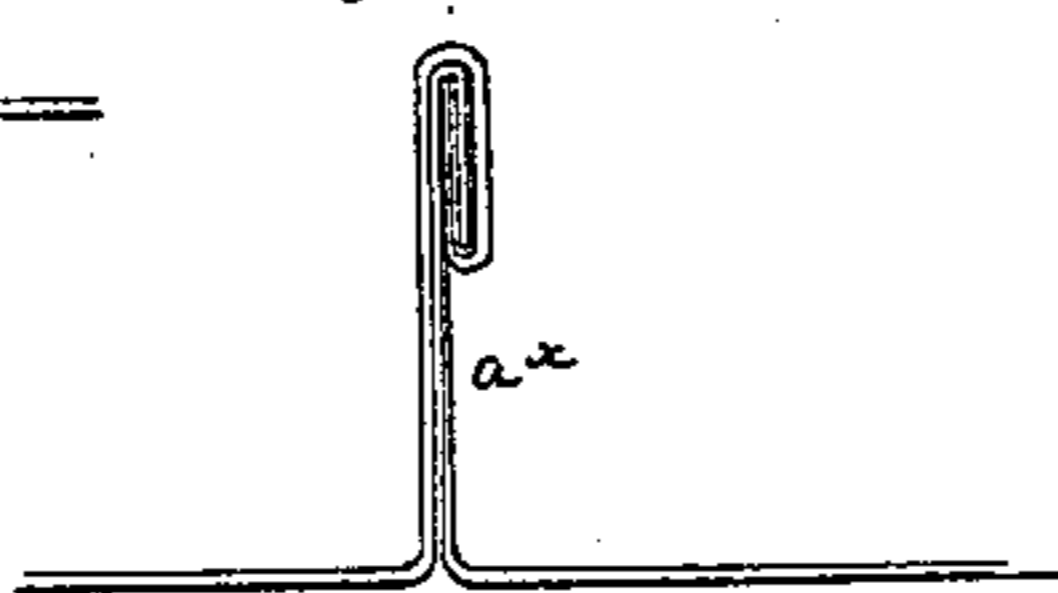


Fig. 6.



Witness.

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN FORMING SEAMS TO SHEET METAL.

Specification forming part of Letters Patent No. 42,966, dated May 31, 1864.

To all whom it may concern:

Be it known that I, F. ROYS, of East Berlin, in the county of Hartford and State of Connecticut, have invented a new and Improved Machine for Forming Seams or Locking together Sheet-Metal Roofing-Plates; and I do hereby declare that the following is 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 is a side sectional view of my invention, taken in the line $x x$, Fig. 2; Fig. 2, a plan or top view of the same, the seat being removed, as indicated by the line $y y$, Fig. 1; Fig. 3, a horizontal section of the main portion of the same, taken in the line $z z$, Fig. 1; Fig. 4, a vertical transverse section of Fig. 3, taken in the line $x' x'$; Fig. 5, a vertical transverse section of Fig. 3, taken in the line $y' y'$; Fig. 6, an end view of two roofing-plates connected together by my invention.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to a new and improved machine for forming the joints or seams of sheet-metal roofing-plates when the latter are laid upon the roof; and it consists in the employment or use of two guide wheels or rollers, bending or forming plates, and two closing-wheels, all being arranged and applied to a mounted frame to operate as hereinafter set forth.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the frame of the machine, which may be constructed of cast-iron, and is supported at its back end by two wheels, B B, one at each side, and supported at its front end by two wheels or rollers, C C, which are placed side by side, with but a narrow space between them, as shown in Figs. 2 and 3.

On the back part of the frame A there is placed a seat, D, the same being on standards a , and through the frame A, directly back of the wheels or rollers C C, four vertical rods, E, pass, the upper ends of which are connected to a plate, F, the latter having a screw, G, passing vertically through it, said screw having its bearing in the frame A, as shown in Fig. 1.

To the lower ends of the rods E there are attached two bars, H H', which are parallel with each other, and have a longitudinal position relatively with the frame A, and have a narrow space between them, which is in line with the space between the wheels or rollers C C. There are also attached to the plate F two rods, I I, which pass loosely through the frame A, and have a curved or spiral plate, J, attached to their lower ends. This plate J is twisted just one-half of a revolution, and it is over the inner part of one of the bars, H. The other bar, H', is provided with a flange, K, the front portion of which projects upward, and is curved transversely at its upper edge, as shown at b , Figs. 4 and 5, said flange being of curved form longitudinally, as shown by the dotted line, Fig. 1, and having its back part of spiral form corresponding with the back part of the plate J.

L L are two horizontal wheels the peripheries of which are corrugated, and the space between them in line with the spaces between the bars H H' and rollers C C. The shafts M M of these rollers pass up through the frame A, and have their upper bearings in a transverse bar, c .

On the shafts M M there are placed toothed wheels N N, which gear into each other.

The operation is as follows: The roofing-plates to be jointed or connected together have their edges a^x turned upward, so as to abut against each other, as shown in Figs. 4, 5, and 6. This turning or bending of the edges of the roofing-plates is previously done by a machine. The invention is then applied to its work by placing the edges a^x of two adjoining strips or layers of plates between the wheels or rollers C C, and the operator takes his place on the seat D and turns one of the shafts M by means of a crank, O. The upper parts of the edges a^x of the roofing-plates are turned over and downward parallel with the upright parts by means of the spiral plate J and the flange K, and the wheels L L close the lap compactly and by their revolutions feed the machine along. If necessary or desired, the machine may be shoved along, a proper handle being applied to it for that purpose. After this first bending and closing of the edges a^x of the roofing-plates, they are subjected to a

second bending, the machine being passed over them again with the plate F lowered by turning the screw G, so as to depress the bars H H' and the spiral plate J. By this means the first bent and closed portion will be folded over and compressed against the lower portions of the edges a^x , and a double lock-joint obtained, as shown in Fig. 6.

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

1. The wheels or rollers C C, adjustable bars H H', spiral plate J, flange K on the bar H', and the closing-rollers L L, all arranged and applied to a mounted frame to operate sub-

stantially as and for the purpose herein set forth.

2. The adjusting of the bars H H', plate J, and flange K by having the same connected with a plate, F, through which a screw, G, passes, substantially as described.

3. Operating the closing-rollers L L through the medium of gear-wheels N N and a crank, O, when said rollers are arranged and applied as shown, and used in connection with the bars H H', spiral plate J, and flange K, for the purpose herein specified.

Witnesses:

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