W. J. BARBER.

Eaves-Trough Machines.

No. 195,914. Patented Oct. 9, 1877.

Fig: 1.

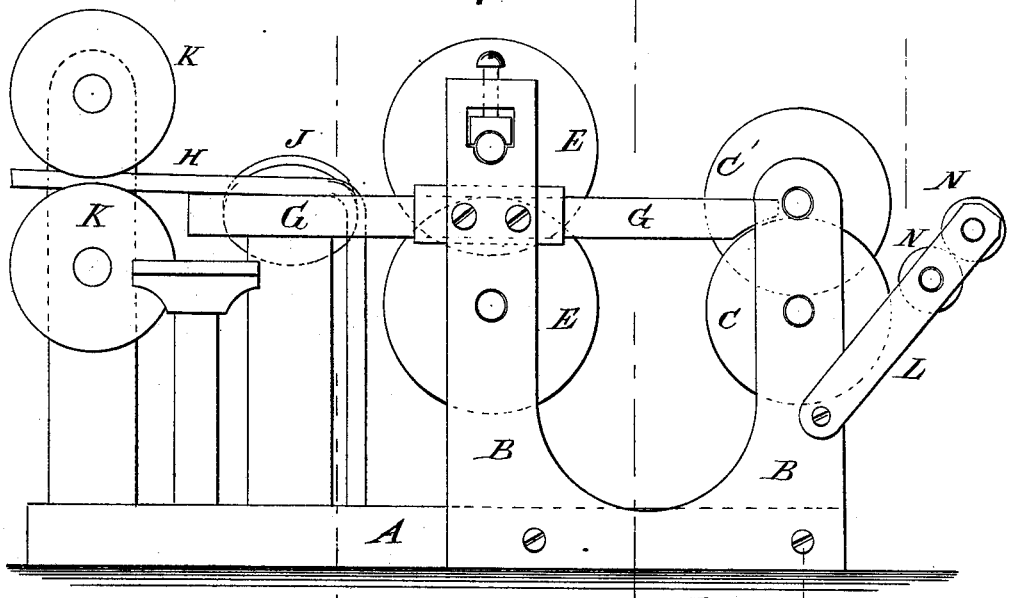


Fig: 2.

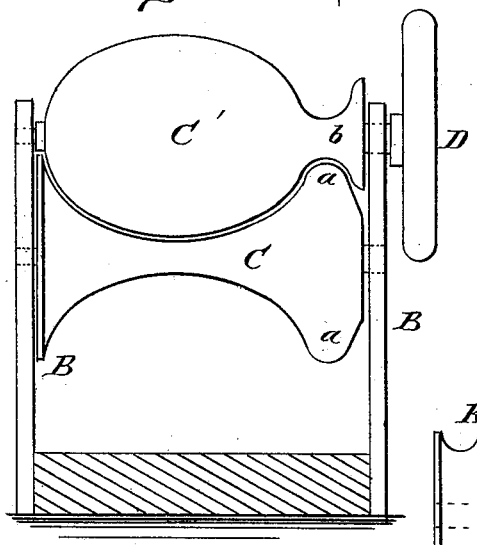


Fig: 3.

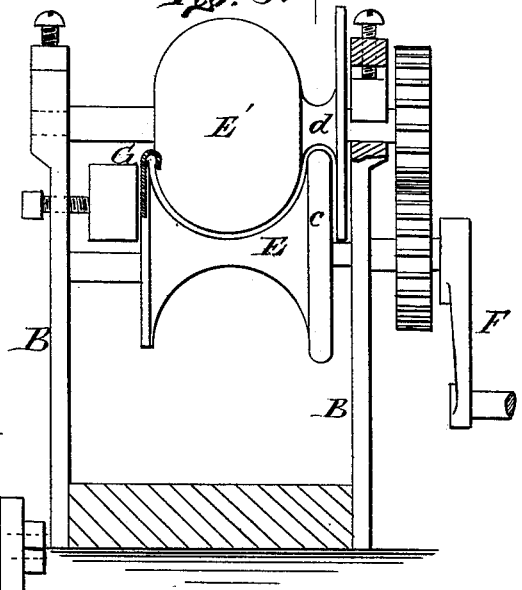
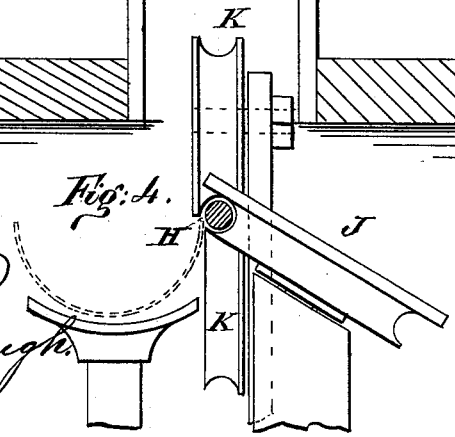


Fig: 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM J. BARBER, OF COVINGTON, INDIANA.

IMPROVEMENT IN EAVES-TROUGH MACHINES.

Specification forming part of Letters Patent No. **195,914**, dated October 9, 1877; application filed August 18, 1877.

To all whom it may concern:

Be it known that I, WILLIAM J. BARBER, of Covington, in the county of Fountain and State of Indiana, have invented a new and Improved Eaves-Trough Machine, of which the following is a specification:

The invention will first be described in connection with the drawing, and then pointed out in the claim.

In the annexed drawings, Figure 1 is an elevation of one side of my improved machine, and Fig. 2 an elevation of the rollers which give the first bend to the sheet-metal ribbon. Fig. 3 shows the second pair of rollers, the guide, and the band-formers. Fig. 4 is a detail, showing the bead-finishers and trough-rest.

Similar letters of reference indicate corresponding parts.

A designates the foundation of the machine, from which standards B rise, bearing at the front end two rollers, C C′, one of which is concave, and the other convex. The concave roller C has a transverse convex portion, *a*, formed on one end, which is annular, and which operates, in combination with a groove, *b*, formed in one end of roller C′, to give the first bend to the metal to form the bead on the trough.

On the shaft of the roller C′ a hand-wheel, D, is keyed, which is used to start the ribbon, of which the trough is formed, into the machine.

E E′ designate two rollers, one of which is convex, and the other concave, for giving the final shape to the troughs. The shafts of these rollers are geared together, and receive power to rotate them from the crank F. One end of the lower roller E has an annular portion, *c*, formed on one end, which operates, in combination with a groove, *d*, in the upper roller E′, to give a sharp bend to the edge of the trough, and prepare the bend for the underturning of the edge to finish the bead.

The plain or unturned edge of the trough is held down and guided by means of a strip, G, of metal, which extends from the rollers C C′, past the rollers E E′, and alongside of a concave table or roller, which supports the trough until it is finished and leaves the machine.

H designates a round rod, arranged horizontally and in line with the bead-benders of the rollers E E′. This rod receives upon it the bent edge of the trough, and, as the trough is moved along, an inclined roller, J, with a concave periphery, and two rollers, K K, having concave peripheries, finish the bead. These bead-finishers are clearly represented in Fig. 1, and in the detail view, Fig. 4.

At the front end of the machine two arms, L, are pivoted, bearing flanged rollers N N, around which the ribbon of sheet metal of which the trough is formed is wound.

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

The concave and convex rolls C *a* C′ *b* E *c* E′ *d*, in combination with the concave rolls J K K, guide G, and rod H, as and for the purpose specified.

WILLIAM JAY BARBER.

Witnesses:

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CHARLES BERGDAHL.