S. G. Booth.

Corrugating Sheet Metal.

No. 12,268. Patented Jan. 23, 1855.

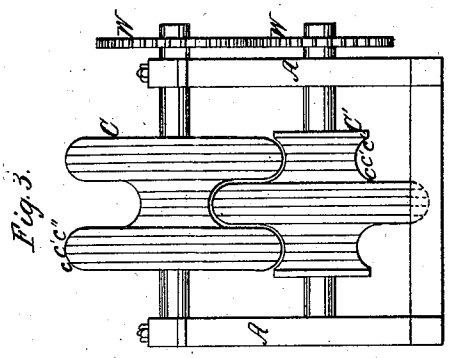


Fig. 3.

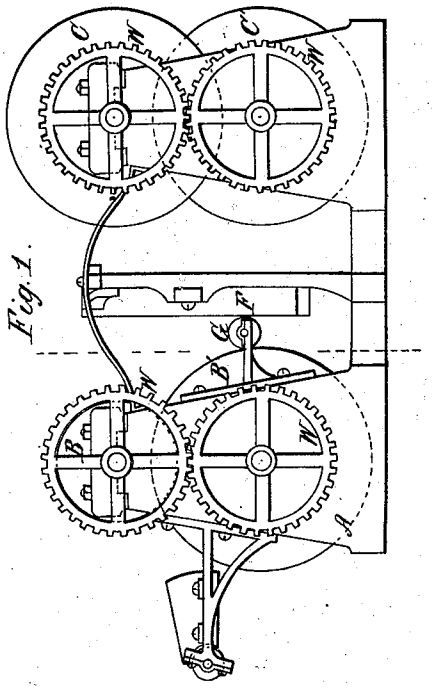


Fig. 1.

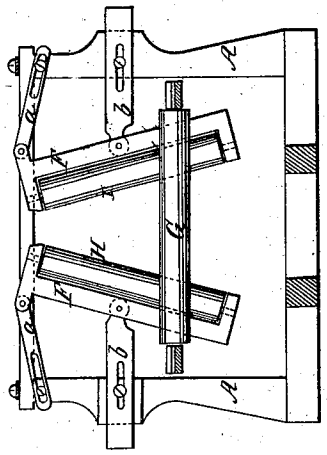


Fig. 4.

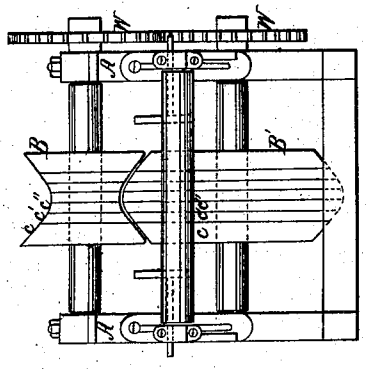


Fig. 2.

UNITED STATES PATENT OFFICE.

SOLOMON G. BOOTH, OF NEW YORK, N. Y.

ROLLERS FOR CORRUGATING SHEET METAL.

Specification of Letters Patent No. 12,268, dated January 23, 1855.

To all whom it may concern:

Be it known that I, SOLOMON G. BOOTH, of the city and county and State of New York, have invented a new and useful Improvement in Machines for Bending Sheet Metal; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, forming part of this specification, in which—

Figure 1 is a side elevation of the machine. Fig. 2 is a front elevation showing first pair of rollers. Fig. 3 is a rear elevation showing second pair of rollers. Fig. 4 is a vertical section parallel to the axes of the rollers on line *x x* of Fig. 1, showing adjustable guide rollers.

Similar letters of reference in the several figures denote the same part.

My invention refers principally to the peculiar construction of the bending rollers by which folds or arches of various sizes may be made upon the same rollers; it consists in forming the rollers of a series of plates perpendicular to the axes of the rollers, the outer edges of the plates constituting the surface on which the sheet is bent.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

In the drawing A is the frame, B B′ the first set of bending rollers, C C′ the second set of bending rollers, operated by the cog wheels W. Between the two sets of bending rollers is the system of guide rollers G, H, I, the former horizontal, and the frames F of the latter so suspended by the jointed slides *a* and *b* as to be capable of any desired inclination.

The bending rollers B B′, C C′ are made up of the series of plates *c c′ c″*, &c., placed side by side upon the shafts of the rollers, and perpendicular to their axes, the outer edges of the plates constituting the bending surfaces of the rollers. The width of the rollers and consequently the curvature of their faces may be changed by the insertion of additional plates, or the removal of some already on the shaft, care being taken that the changes shall be so made that the symmetry of the surface shall not be destroyed. The plates are secured to the shaft by a key or any suitable device.

The operation of machines of this character being well known, need not be described except so far as concerns the guide rollers, which being adjusted to suit the curve given to the sheet by the pair of bending rollers in front them, will receive the sheet and assist it in its transit to the succeeding pair; the slides *a b* admitting of sufficient motion to the roller frames F to suit any curvature that may be given to the sheet by the faces of the bending rollers.

I do not claim making the rollers of adjustable sections for the purpose of repeating bending operations upon a piece of sheet metal, nor do I claim making rollers of two or more parts, but

I do claim—

Making the swages and dies for forming beams of wrought iron of numerous thin sections so that one two or more sections can be removed to produce beams of different forms for the purpose of saving the expense and inconvenience of a multiplicity of pairs of swages and dies all in the manner herein substantially as set forth.

In testimony whereof, I have hereunto signed my name before two subscribing witnesses.

S. G. BOOTH.

Witnesses:
GEO. PATTEN,
SAML. GRUBB.