W. B. & O. P. SCAIFE.

Machine for Corrugating Sheet-Metal.

No. 164,399. Patented June 15, 1875.

fig: 2.

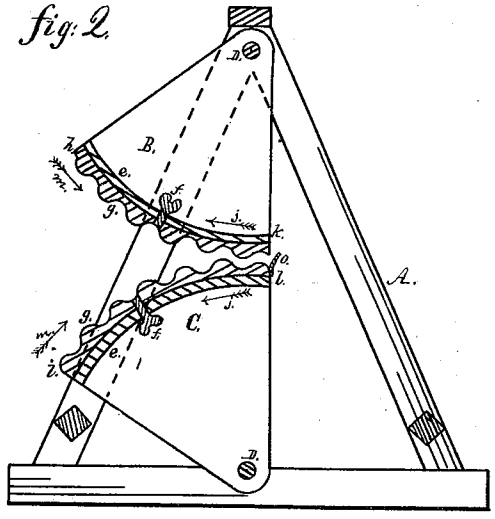
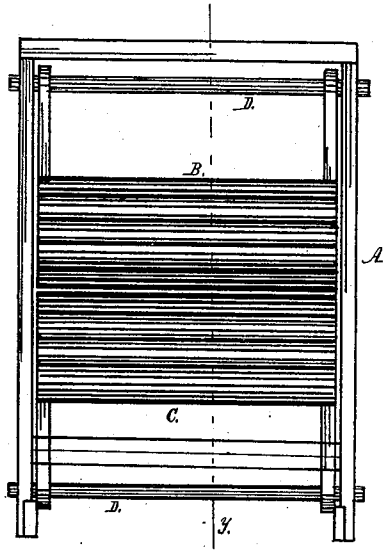


fig: 1.



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UNITED STATES PATENT OFFICE.

WILLIAM B. SCAIFE AND OLIVER P. SCAIFE, OF ALLEGHENY, PA., ASSIGNORS TO WILLIAM B. SCAIFE & SONS, OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR CORRUGATING SHEET METAL.

Specification forming part of Letters Patent No. **164,399**, dated June 15, 1875; application filed January 23, 1875.

CASE B.

To all whom it may concern:

Be it known that we, WILLIAM B. SCAIFE and OLIVER P. SCAIFE, both of the city and county of Allegheny, in the State of Pennsylvania, have invented a certain new and useful Improvement in Machines for Corrugating Sheet Metal; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Our invention relates to an improvement in machines for corrugating sheet metals; and consists in the use of two sections of a cylinder, pivoted in a suitable frame, the face or periphery of said sections of a cylinder being provided with detachable face-plates, corrugated, and which mesh into each other, the whole being so constructed that the face-plates can be removed at will and others substituted, whereby sheet metal can be corrugated with various size and contour of corrugations by a single machine by simply changing the face-plates.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

In the accompanying drawings, which form part of our specification, Figure 1 is a front elevation of our improvement in machine for corrugating sheet metal. Fig. 2 is a vertical and transverse section of the same at line *y* of Fig. 1.

In the accompanying drawings, A represents the frame-work. B and C represent two sections of a cylinder, which are pivoted and secured on the shafts D. To the periphery or faces *e* of the sections B and C are secured, through the medium of set-screws or bolts, as indicated at *f*, face-plates or forms *g*, the outer surfaces of which are corrugated. The corrugations of the face-plates or forms *g* mesh into each other similar to the teeth of two cog-wheels, care being taken to allow sufficient room or play between the face-plates and corrugations for the thickness of the sheet metal which is to be corrugated.

The mode of applying the power for imparting motion to the sections B and C we leave to the judgment and skill of the mechanic. The desired motion is an oscillating of the sections B and C, so that the edges *h* and *i* will come together when the sections are moved, as indicated by the arrows *m*, and the edges *k* and *l* will come together when the sections are moved in the direction indicated by the arrows *j*.

The operation of corrugating the sheet metal is as follows: When the edges *k* and *l* are together, the operator inserts the sheet of metal to be corrugated back so that its inner edge will come against the stop *o*; then, when the sections B and C travel in the direction indicated by the arrows *m*, the ribs of the face-plates will force the iron by impinging upon it into the corrugations of each of the face-plates. If the operator desires to change the size or form of the corrugations in the sheets of metal, he removes the face-plates *g* from the sections B and C, and substitutes others having corrugations corresponding to the form and size of the corrugations desired in the sheets of metal.

By constructing a machine for corrugating sheet metal as hereinbefore described, a single machine may be made to corrugate any desired number of different sizes and forms of corrugations in sheet metal by simply changing the face-plates *g* and substituting others, whereby great saving of expense in the cost of producing corrugated sheet metal is accomplished.

Having thus described our improvement, what we claim as new is—

In a machine for corrugating sheet metal, the combination of the oscillating segmental sections B C, pivoted at D D, and having detachable corrugated face-plates *g g*, respectively, substantially as and for the purpose hereinbefore described and set forth.

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Witnesses:
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