

J. MOFFET.
Improvement in Machines for Corrugating Metals.
 No. 129,290. Patented July 16, 1872.

Fig. 2.

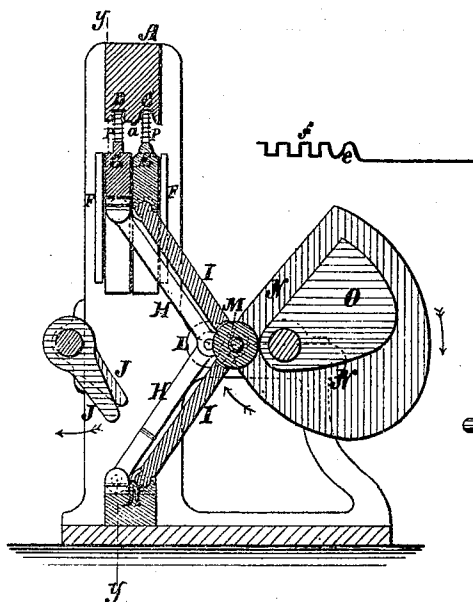


Fig. 1.

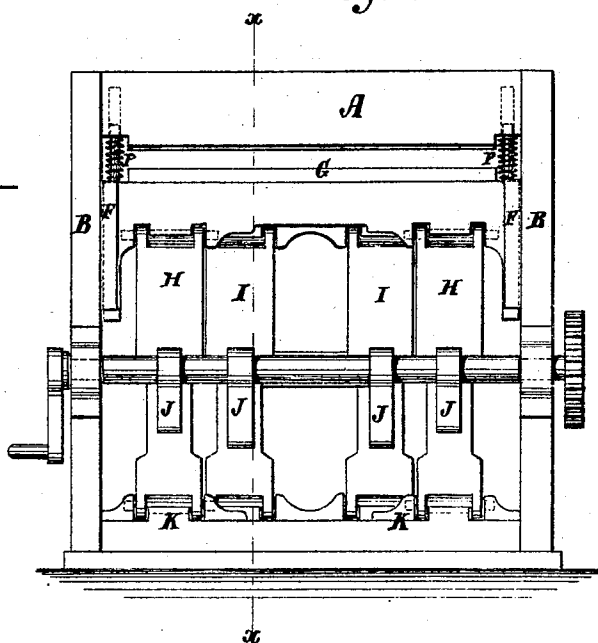


Fig. 4.

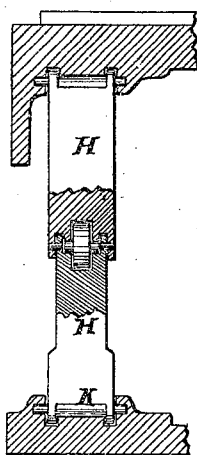
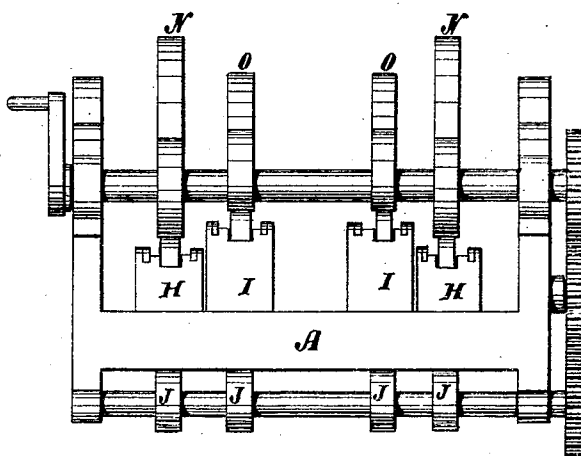


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN MOFFET, OF NEW YORK, N. Y.

IMPROVEMENT IN MACHINES FOR CORRUGATING METALS.

Specification forming part of Letters Patent No. 129,290, dated July 16, 1872.

Specification describing a new and Improved Machine for Corrugating Iron, invented by JOHN MOFFET, of New York, in the county and State of New York.

My invention consists of a set of preparatory dies and a set of finishing-dies for making square corrugations, whereby the said corrugations are formed by a preparatory operation, in which a set of oval dies form an oval groove in the iron about as deep as the finished groove is to be, and then said groove completed by an operation of the finishing-dies acting upon the metal previously formed by the preparatory dies, and brought to the complete form required. The arrangement is such that the finishing-dies are brought into action first and complete a corrugation in a manner that cannot be done by the ordinary machines, in which only one set of corrugating-dies is used.

Figure 1 is a front elevation of my improved machine. Fig. 2 is a cross-section on the line *xx* of Fig. 1. Fig. 3 is a plan view. Fig. 4 is a section on the line *yy* of Fig. 2, and Fig. 5 is an edge view of a sheet of metal partly corrugated.

Similar letters of reference indicate corresponding parts.

A represents a strong beam of metal on the top of a frame, B; or it may be a bed-piece of any suitable form or arrangement, with a long oval groove, C, in its face, and another square groove, D, parallel with C, and arranged as far from it as the width of the grooves of the corrugations is to be. The said grooves C and D are to be nearly equal in capacity, but not quite equal in depth, for the oval form of groove C requires it to be a little deeper than D in order to contain exactly the same quantity of metal; hence the outer edges *a* of the walls of said groove C extend a little beyond the corresponding edges of groove D. E is a long oval die, being the counterpart of the groove C, and arranged in guides F at its ends to work into and out of said groove for bending up the sheet *d* into the preparatory groove C. G is a long square die, being the counterpart of groove D, and arranged, similarly to

E, in ways F, for sliding into and out of said groove D. The grooved beam A and the dies E and G are as long as the width of the widest sheet of metal they are intended to corrugate, or a little longer, so that said sheet can be passed along between them. The said dies are mounted on the upper ends of the toggle-jointed arms H I, whose lower ends are jointed to the frame at K, and at their joints said bars are provided with a friction-roller, L M, respectively.

The cam N acts upon roller L of the arms H, and forces the die G up into groove D, and the cam forces the die E up to its groove. Said dies are forced down by the springs P, but the toggle-jointed arms are thrown off their centers first by the tappets J. It will be seen that the cam N is arranged to force the finishing-die G up a little in advance of the die E and to hold it until E has begun to move down again. Thus, when the final action upon the corrugation takes place, to complete the form the sheet is free to be centered in the finishing-dies, so that the preparatory form *e* will merge harmoniously into the finished shape *f*, and will then be firmly retained, so that the subsequent action of the preparatory die will not draw the stock back and disfigure the completed corrugation as when a single set of dies is used to make the corrugations complete at one operation. The sheet is moved along the extent of one groove at each operation of the dies above said dies, and its adjustment is facilitated by the dropping of the oval groove *e* on the top of die G.

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

The beam A provided with the oval groove C, and the rectangular groove D parallel thereto, in combination with the long oval die E and rectangular die G, all arranged to make first an oval and then a rectangular corrugation, as set forth.

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Witnesses:

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