

A. CLARK.

Manufacture of Corrugated Metal Shutters.

No. 137,827.

Patented April 15, 1873.

Fig. 1.

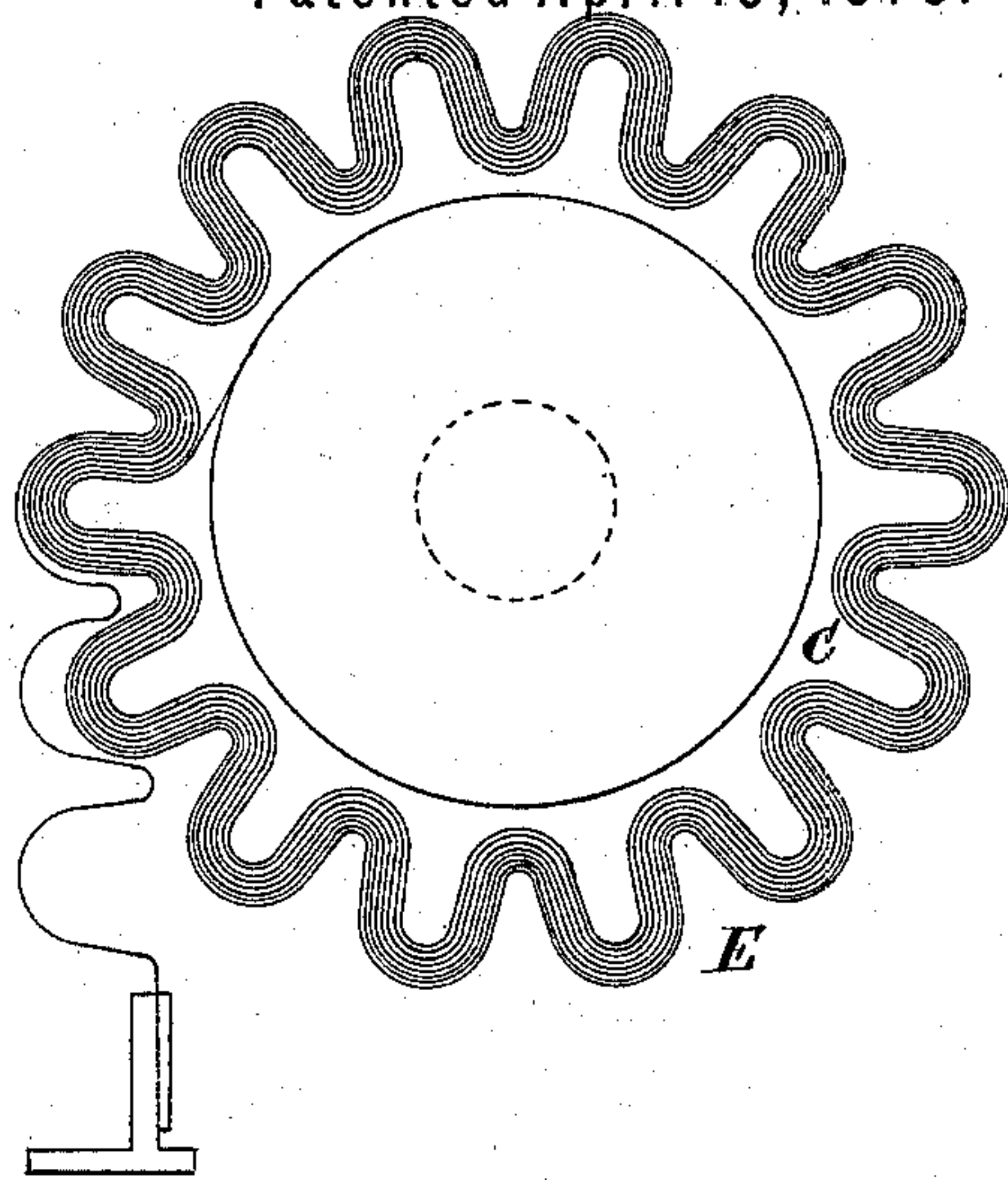
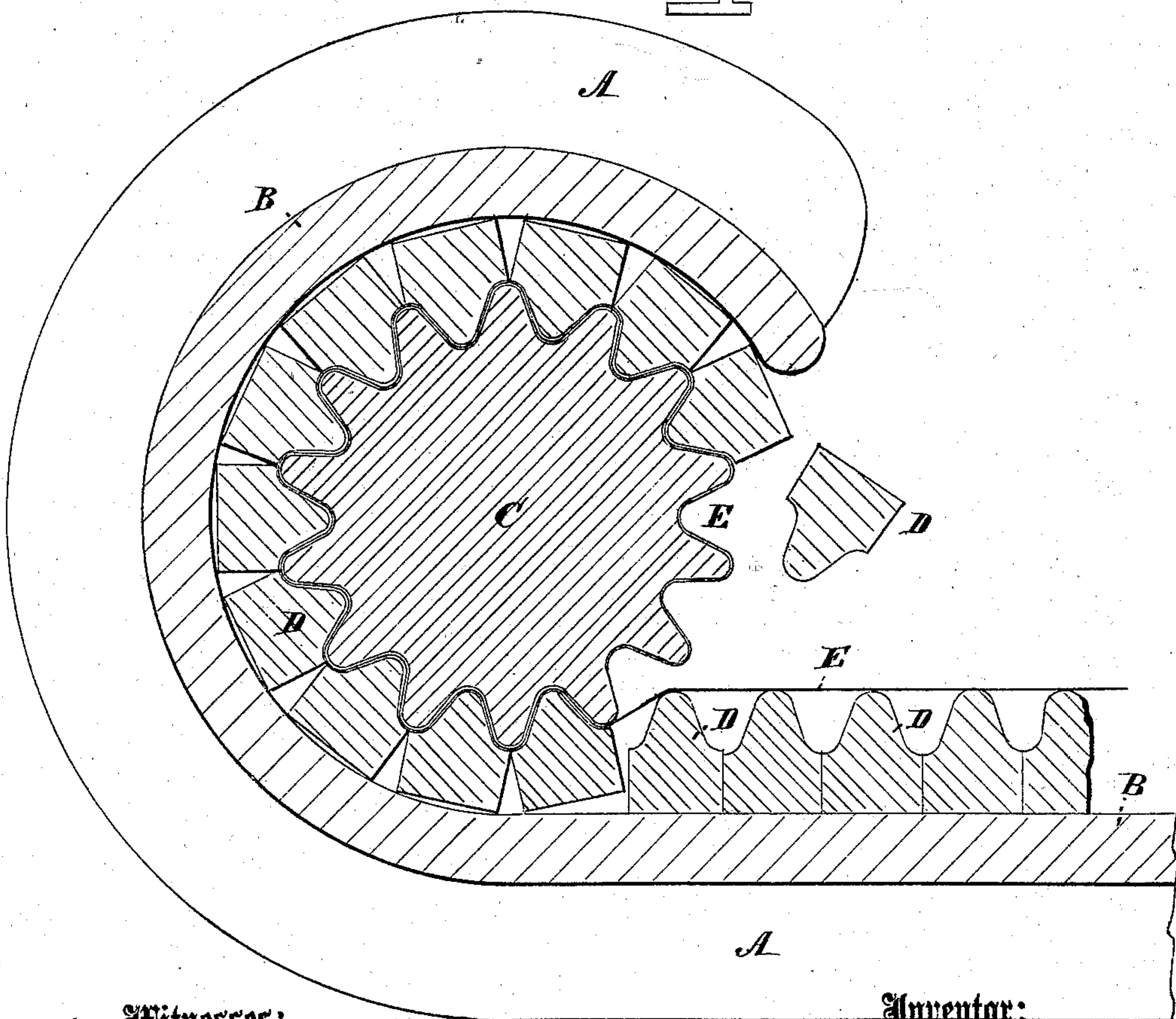


Fig. 2.



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For
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UNITED STATES PATENT OFFICE.

ALEXANDER CLARK, OF LONDON, ENGLAND.

IMPROVEMENT IN THE MANUFACTURE OF CORRUGATED-METAL SHUTTERS.

Specification forming part of Letters Patent No. **137,827**, dated April 15, 1873; application filed March 26, 1873.

To all whom it may concern:

Be it known that I, ALEXANDER CLARK, of London, in the county of Middlesex, England, have invented a new and useful Improvement in Corrugated-Metal Revolving Shutters, and in their Manufacture; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification.

The object of my invention is to so coil corrugated-metal revolving shutters that they will occupy comparatively little space and make less noise in coiling and uncoiling than hitherto. My invention consists in gradually changing the width of the corrugations, that those in one convolution about the barrel may coincide with and fit between those of the preceding.

Figure 1 of the accompanying drawings shows (in end view) a shutter made according to my invention, the shutter being represented as coiled upon its barrel.

Corrugating machinery of the ordinary description may be employed, each convolution being corrugated with a separate pair of dies; but my new method of corrugating the shutters is (by the apparatus) illustrated in Fig. 2, in which—

A represents a curved frame of the same width as the sheet E to be corrugated, forming a curve correspondent to that of a former and table, B. Within said former B revolves a corrugating cylinder or mandrel, C, while D is a series of dies laid side by side on table B, and brought within reach of said rotary cylinder. A continuous sheet of metal, E, is placed on the dies D, and the edge of the sheet placed between the first die and a cor-

rugation of cylinder C, so as to be gripped. The sheet of metal and the loose die D are both drawn in together between the mandrel C and the table or former B. The dies D, which are fed in successively, force the sheet metal between the corrugations of cylinder C, are carried round by the rotation of said cylinder or roll, and are discharged at the opening, the shutter being retained on the roll or cylinder C. Other sheets are run successively upon die-roll C until the shutter is completed, each successive convolution having its corrugations smaller than the preceding. In this manner the first coil serves to form the next, and so on.

The detachable dies must of course change for each convolution which is corrugated.

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

1. Metallic revolving shutters, provided with the corrugations of each convolution, varying in dimensions, substantially as and for the purpose hereinbefore described.

2. The method of passing successive portions of sheet metal between corrugating dies upon one another, and without changing the corrugating-roll, as and for the purpose set forth.

3. A series of sets of corrugating-dies, D, a corrugating die-roll, C, and a curved table, B, combined as and for the purpose described.

The above specification of my invention signed by me this 6th day of December, A. D. 1872.

ALEXANDER CLARK.

Witnesses:

WM. CLARK,

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