

No. 689,281.

Patented Dec. 17, 1901.

A. E. BROWN.

DOVETAILED SHEET METAL OR MATERIAL.

(Application filed Mar. 26, 1901.)

(No Model.)

2 Sheets—Sheet I.

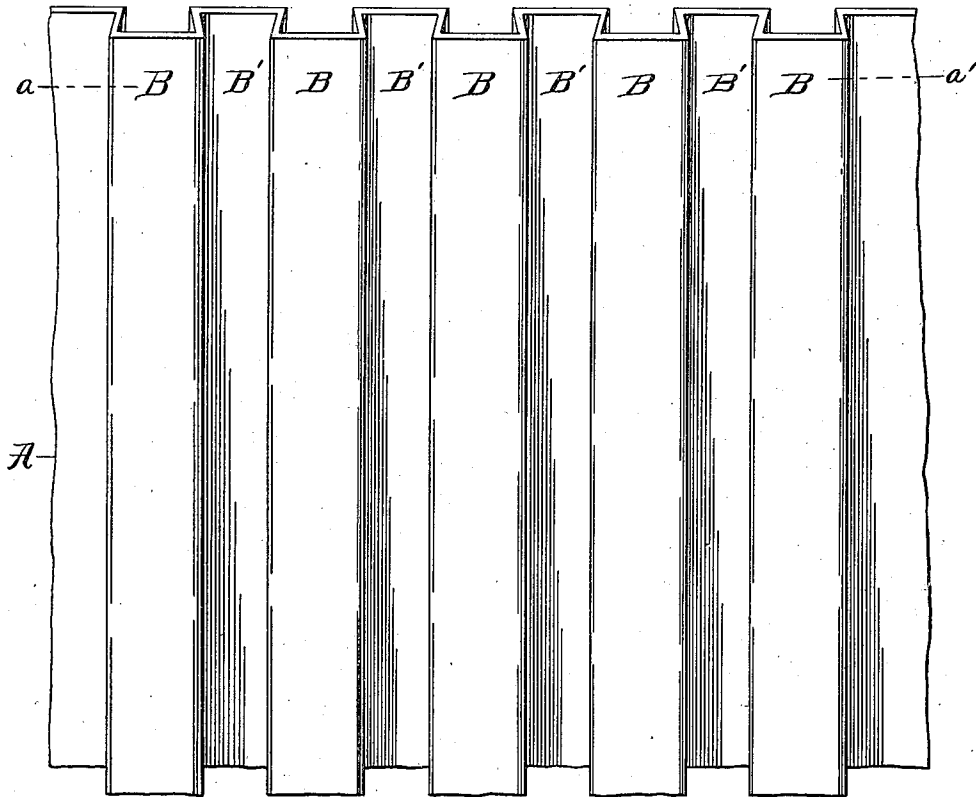


Fig. I.

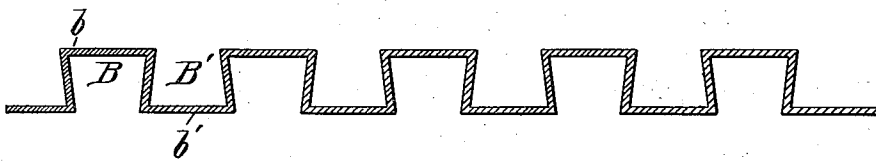


Fig. III.

Witnesses:

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L. G. Lopper.

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2 Sheets—Sheet 2.

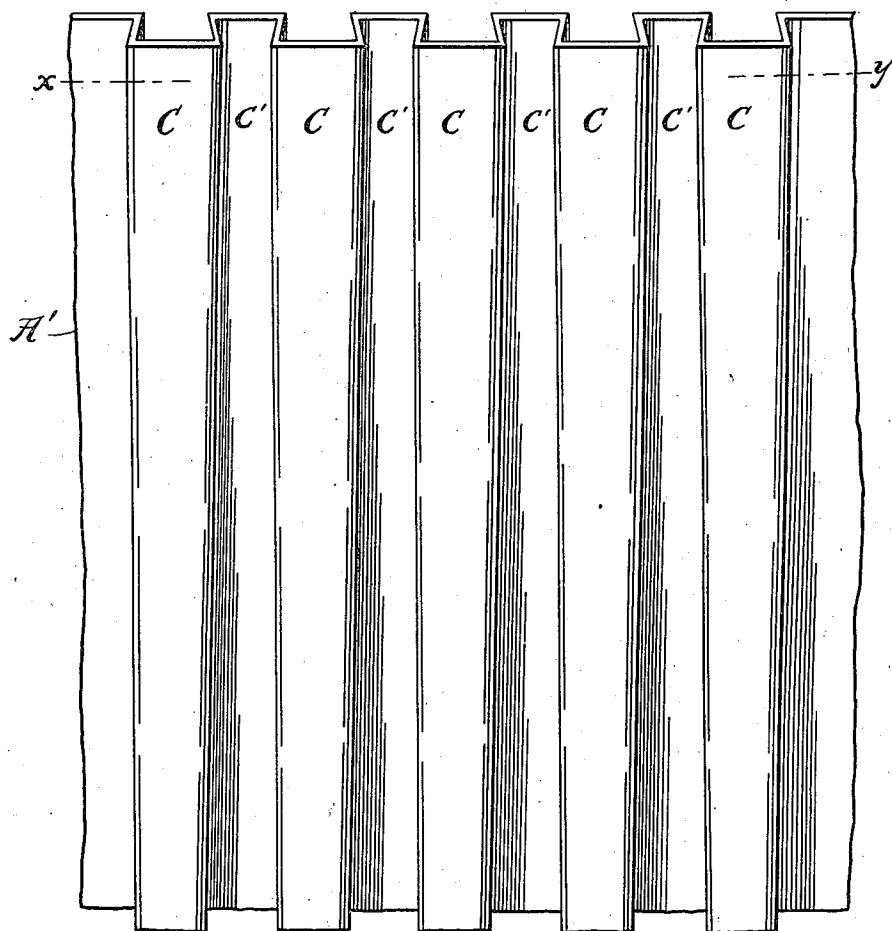


Fig. II.

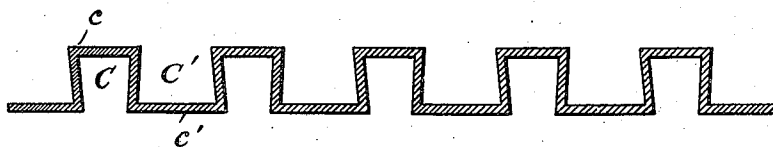


Fig. IV.

WITNESSES:

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UNITED STATES PATENT OFFICE.

ALEXANDER E. BROWN, OF CLEVELAND, OHIO, ASSIGNOR TO THE BROWN
HOISTING MACHINERY COMPANY, A CORPORATION OF DELAWARE.

DOVETAILED SHEET METAL OR MATERIAL.

SPECIFICATION forming part of Letters Patent No. 689,281, dated December 17, 1901.

Application filed March 26, 1901. Serial No. 52,946. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER E. BROWN, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful article of manufacture of a character to be advantageously employed in a variety of connections, especially for or in connection with roofing, partitions, flooring, and like structural works; and I hereby declare the following to be a clear, full, and exact description thereof, reference being had to the accompanying drawings, making a part of this application.

My invention relates to that class of manufactured articles made up more generally from sheet metal, and thereby converted into a series of dovetail-shaped corrugations, the product being a form or species of structural material of largely-enhanced strength as compared with its previous form and which by reason of its acquired configuration is at the same time adapted to many new and desirable uses and purposes. For all uses, for instance, to which the ordinary sinuously-corrugated iron is now applied, as to constitute roofs, awnings, or walls, and particularly in a special form of my manufacture that I claim herein, it will be found that my said invention lends itself more readily and in a superior manner than any article of the kind that to my knowledge has yet been produced. So, too, when in similar uses it is desired to employ cement or other plastic material as an exterior or interior coating, as is the case, to illustrate, in the species of building material shown and described in an application by me for Letters Patent in the United States, filed March 7, 1901, and being Serial No. 50,215, the peculiar product and manufacture I present in this application will in all cases be available for the purpose and to the highest degree.

To enable those skilled in the art to which my said invention relates to understand and use the same, I will now proceed to illustrate and explain the invention by reference to the said drawings.

Figure I is a superficial view of my said dovetailed metal or material wherein the several corrugations have cross-sections of the same dimensions throughout their course.

Fig. II is a like view, but where said corrugations taper throughout their course, and therefore present cross-sections of different dimensions in different parts of the several corrugations. Fig. III is an end or cross-sectional view of the metal or material shown in Fig. I across the line a and a' therein. Fig. IV is a like view across the line xy in Fig. II.

In said drawings, A A' are specimen portions of my said manufactured article, and B B and C C indicate the characterizing series of dovetailed corrugations in the same, as viewed from one front of said sheet. B' B' and C' C' make up the corresponding intervening series of similar corrugations. The latter series evidently correspond in every particular with the series B C, except that they are reversed as compared with said latter series. In other words, the series B C and the series B' C' in no respect differ, except that each member of one series is reversed with respect to the adjacent member of the other series and is the complement thereof in any given specimen of the article in question. Alternating with a dovetailed corrugation B is a reversed dovetailed corrugation B' throughout the entire piece or sheet of the manufactured substance or material A or A' constituting my invention.

Fig. III clearly presents the outline of the two series B and B' composing the piece A and discloses, by means of the sectional views $b b'$, that at any cross-section of said piece said dovetailed corrugations B and B' are in each and every case similar one to the other.

Fig. II, however, presents a variation or modification of the arrangement and relation of the complementing series that make up the piece A in the respect that the several features therein C C', corresponding with the corrugations B and B' in the piece A, and together making up the piece A', are tapering throughout their length, so that a cross-section of the piece A' at any point, as shown in Fig. IV, must show a series of alternately-reversed dovetails c and c' , representing the several corrugations C and C', each alternate member of the same being alike in dimensions.

The value of structural material made up in tapering dovetail-shaped corrugations, as

shown in Figs. II and IV, will be especially appreciated in the construction of roofs, awnings, or walls. Owing to the regular alternation of a larger corrugation C and a smaller corrugation C', as arranged in the piece A', it is plain that in laying a roof or awning or making an upright wall or partition one piece C' may be telescopically introduced into and made to overlap another in such manner as not only to break or overlap a joint, and thereby shed rain or moisture, but to also thereby interlock the entire spread of pieces C' C' that go to make up the roof or wall in question.

In my application for United States Patent serially numbered 50,215, to which I have hereinbefore alluded, I make claim to a method of constructing material for roofs, floors, and the like which includes as an element the use of a medium that embodies my present invention. I therefore hereby disclaim in favor of said application and the invention cov-

ered thereby the invention herein disclosed and claimed so far as it is an essential element of said invention; but all uses and purposes to which my present invention is adapted that do not essentially enter into the former invention and application I reserve for and desire to include in the claim herewith.

I therefore claim and desire to secure by Letters Patent—

An article of manufacture, consisting of a piece or sheet of metal, or other suitable material, having a series of dovetail-shaped corrugations, each of said corrugations having the same depth throughout its length and a taper which is reversed with respect to that of the next adjacent corrugation in the series, substantially as shown and described.

ALEXANDER E. BROWN.

In presence of—

J. B. WILBERDING,
GEORGE C. WING.