

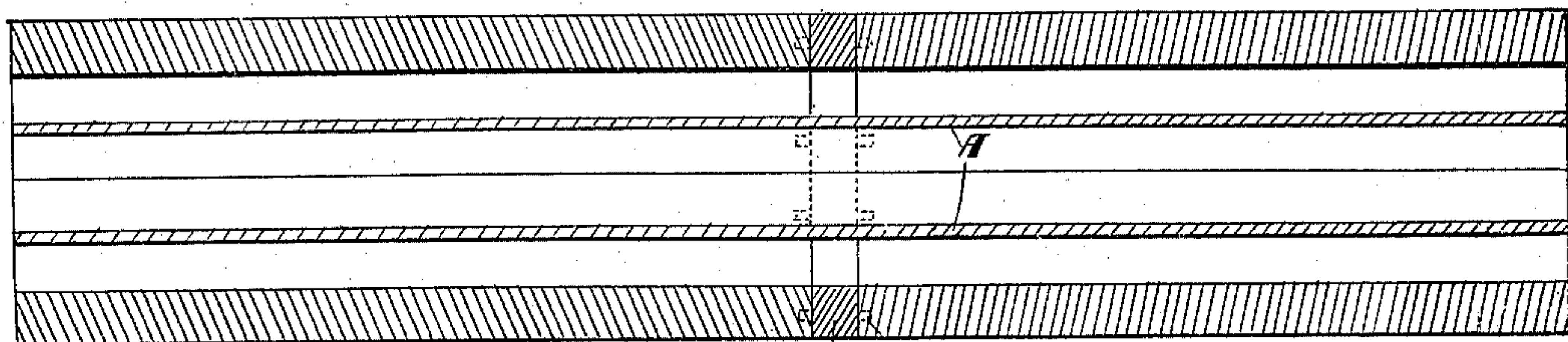
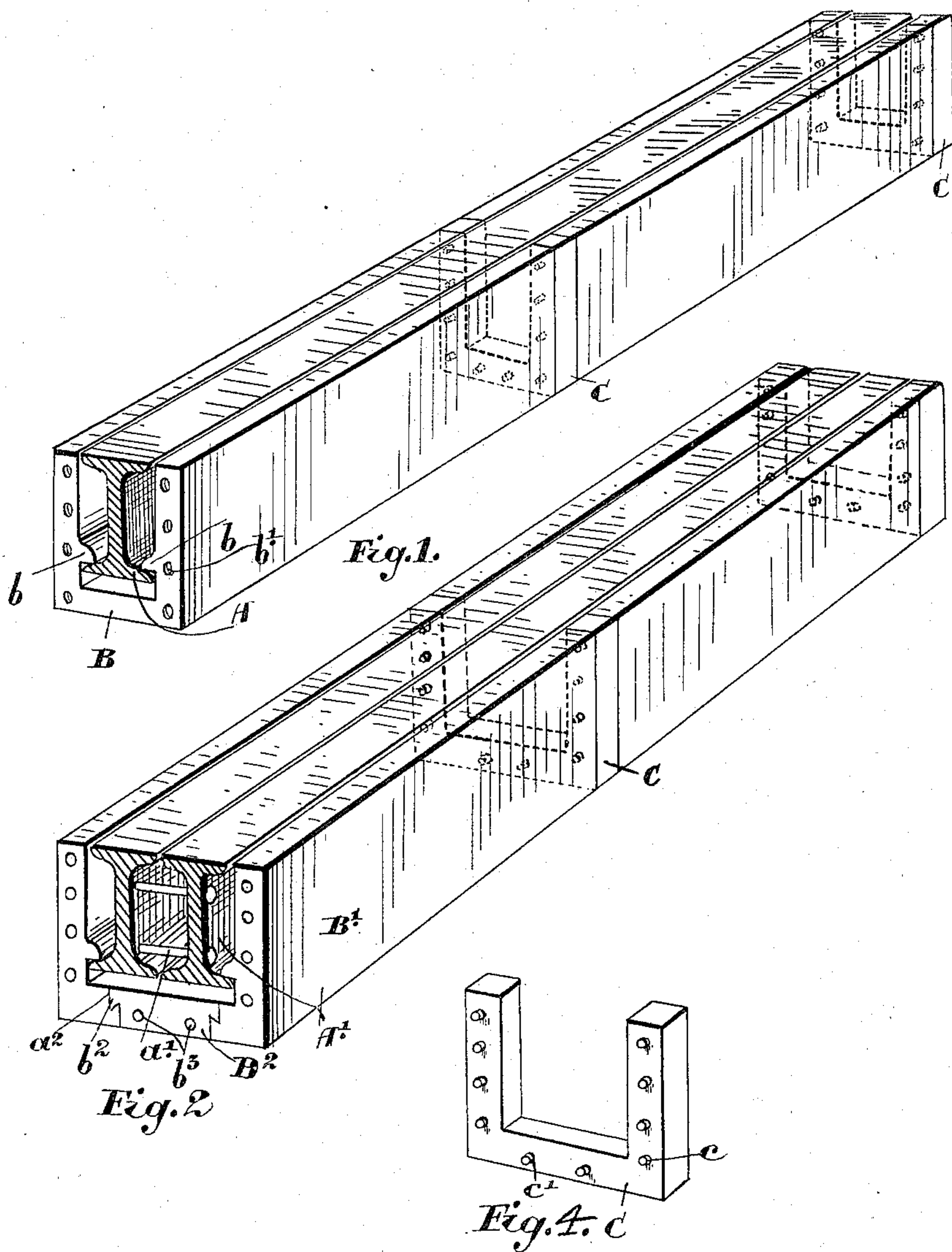
(No Model.)

J. M. GANDER.

SELF SUPPORTING FIREPROOF COVERING FOR STEEL BEAMS.

No. 598,702.

Patented Feb. 8, 1898.



Witnesses.  
H. J. S. Allison

Fig. 3. c

Inventor  
J. M. Gander  
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# UNITED STATES PATENT OFFICE.

JOHN MICHAEL GANDER, OF TORONTO, CANADA.

## SELF-SUPPORTING FIREPROOF COVERING FOR STEEL BEAMS.

SPECIFICATION forming part of Letters Patent No. 598,702, dated February 8, 1898.

Application filed February 15, 1897. Serial No. 623,463. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN MICHAEL GANDER, master plasterer, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Self-Supporting Fireproof Coverings for Steel Beams in Building Construction, of which the following is a specification.

My invention relates to improvements in self-supporting fireproof covering for steel beams and columns in building construction; and the object of the invention is to design a self-supporting plaster or other covering of similar material which will effectually cover the beam or column and be absolutely secure from falling; and it consists, essentially, of making the covering in U-shaped lengths of plaster, with intermediate locking-pieces provided with teats designed to fit into corresponding holes in the lengths, the parts being otherwise constructed and arranged in detail, as hereinafter more particularly explained.

Figure 1 is a perspective view of a single beam provided with my improved covering of plaster, terra-cotta, or any other suitable material. Fig. 2 is a perspective view of a double beam, showing the construction of my improved covering applied to such beam. Fig. 3 is a sectional plan of Fig. 2. Fig. 4 is a detail of the intermediate locking-piece used for the form shown in Figs. 2 and 3.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is a single beam, (shown in Fig. 1,) and B are the lengths made in the form of plaster, terra-cotta, or any other suitable composition. The lengths B are provided with inwardly-extending lips  $b$ , which rest on the outer edges of the I-beams.

C is an intermediate locking-piece, which is provided with a series of teats  $c$ , as indicated in dotted lines in Fig. 1, and corresponding to the teats shown in the drawings. The teats  $c$  are arranged on each side of the intermediate locking-piece and are designed to fit into corresponding holes  $b'$ , formed in the ends of the lengths B.

In Fig. 2 I show double beams A', connected together by bolts  $a'$ , and I make the covering in divided lengths B', connected together by an intermediate piece B<sup>2</sup>, formed, preferably,

with a half-dovetailed tongue  $b^2$ , fitting into a corresponding groove  $a^2$ , made in the sides B' of the length. The lips  $b$  are formed as heretofore and rest upon the outer edges of the bases of the I-beams. Holes  $b'$  are formed in the sides, as hereinbefore described, and intermediate holes  $b^3$  are made in the central piece B<sup>2</sup>. The intermediate locking-pieces C' in this instance are provided with not only the side teats  $c$ , but also the central teats  $c'$  to fit into the corresponding holes  $b^3$  at the end of each intermediate length. The intermediate locking-piece C' is also in this instance formed with the teats  $c$  and  $c'$  at each side, as indicated in Fig. 3, so that they fit into the ends of the opposing lengths.

Heretofore metal steel beams and columns have been covered with plaster in various ways, the plaster extending continuously from end to end of the beam. It has been found that after being up for some time the plaster would crack and fall down in large pieces. In my invention by making it in lengths, with the intermediate locking-pieces, there is no danger whatever of long breaks occurring, and should a short break occur it would be a very easy thing to take out one of the lengths and substitute another. In addition the lengths are absolutely securely held in position and when calcimined over no joint is seen, and the appearances are perfect from end to end of the beam. In plastering also it has been customary to use wood furring between the plaster and the beam, and by my invention this of course is entirely dispensed with. In the form of my covering it will be noticed also that three air-spaces are provided, one at each side and one at the bottom, as indicated by the letters  $x x$  and  $y$ , (see Figs. 1 and 2,) and that a continual annular air-space is provided.

What I claim as my invention is—

1. The combination with a steel beam, of a series of lengths substantially U-shaped in cross-section, interior longitudinal lips attached to or forming part of the lengths and designed to rest on the lower edges of the beam and means for interlocking the ends of the lengths as and for the purpose specified.

2. The combination with a steel beam, of a series of lengths substantially U-shaped in cross-section, interior longitudinal lips at-



tached to or forming part of the lengths and designed to rest on the lower edges of the beam, holes in the ends of the lengths and an interlocking U-shaped piece situated between each two lengths and having teats designed to fit into the holes in the ends of the lengths as and for the purpose specified.

3. In combination the double beam, the covering sides of suitable material substantially L-shaped, the interior lips forming part of the sides and resting on the outer edges of the double beam, the intermediate bottom length, means for connecting it to the sides, holes in the ends of the side pieces and intermediate bottom pieces, and the U-shaped interlocking pieces provided with teats at each side designed to fit into the holes of the abutting length as and for the purpose specified.

4. In combination the double beam, the

covering sides of suitable material substantially L-shaped, the interior lips forming part of the sides and resting on the outer edges of the double beam, the half-dovetailed groove in the inner edges of the side pieces, the intermediate bottom length and the half-dovetailed tongue designed to fit into the corresponding grooves in the inner bottom edges of the side piece, holes in the ends of the side pieces and intermediate bottom piece and the interlocking pieces provided with teats at each side designed to fit into the holes of the abutting length as and for the purpose specified.

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Witnesses:

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