V. FONT.

BUILDING STRUCTURE.

APPLICATION FILED SEPT. 30, 1908.

939,000.

Patented Nov. 2, 1909.

Fig. 1.

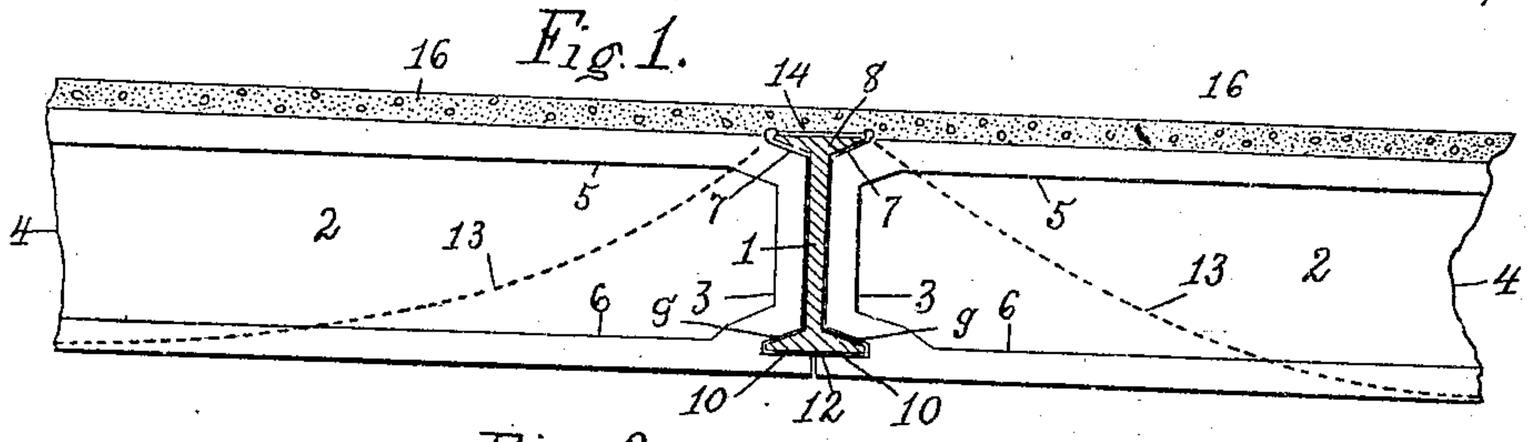

Fig. 2.

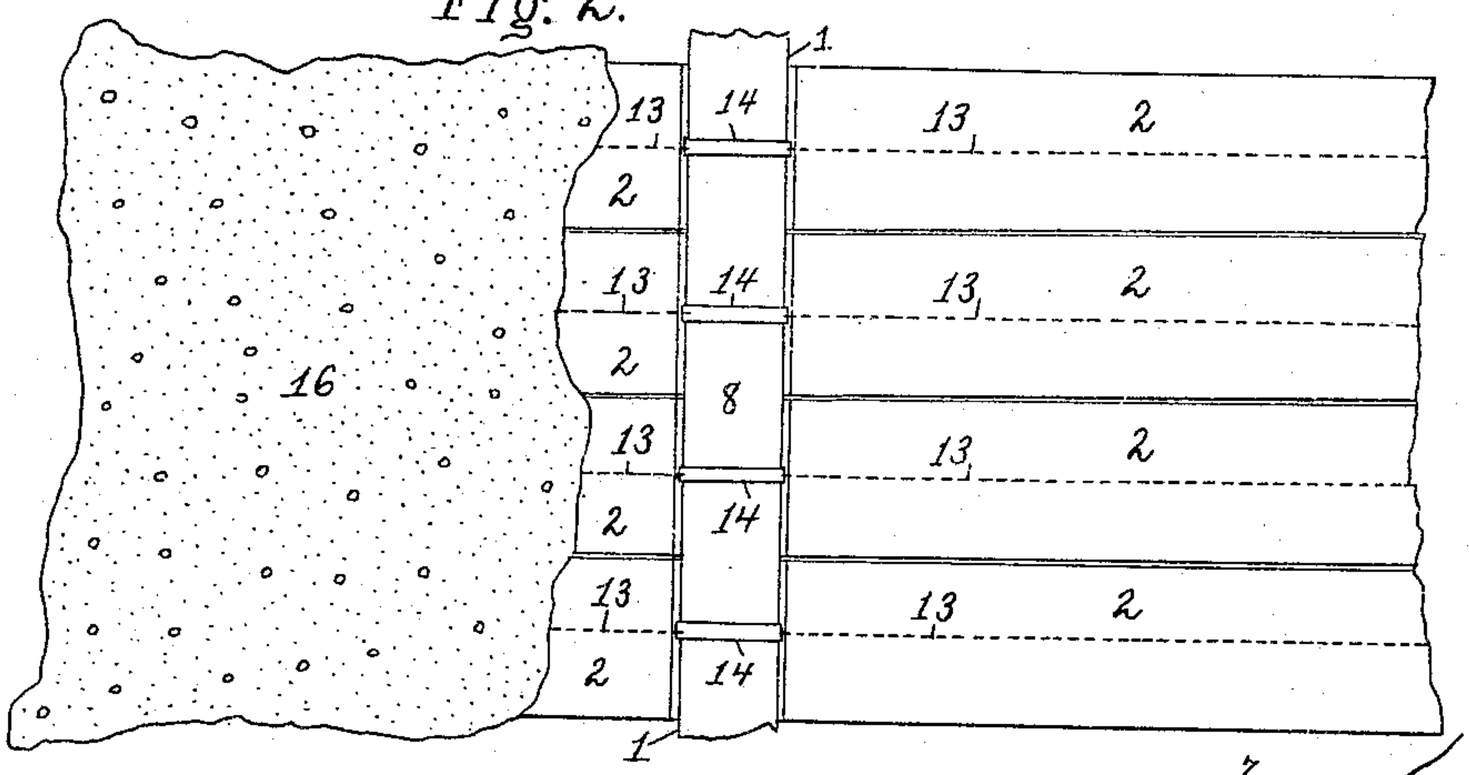

Fig. 3.

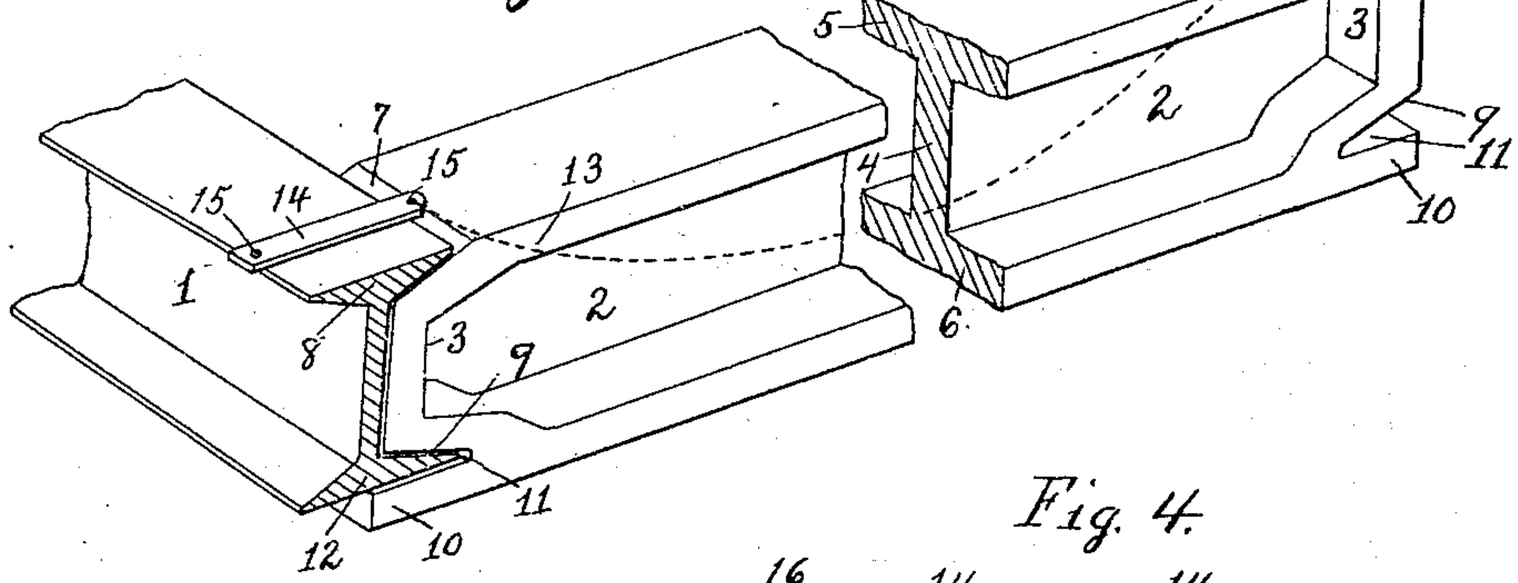

Fig. 4.

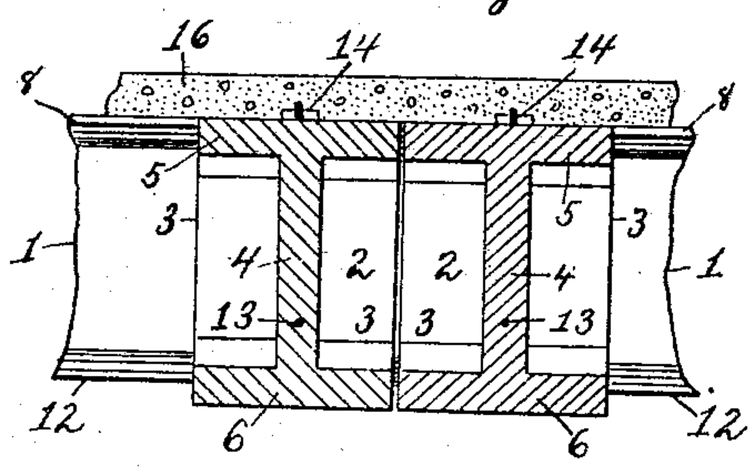

Fig. 6.

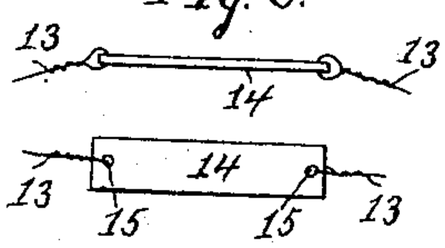

Fig. 5

Witnesses:
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UNITED STATES PATENT OFFICE.

VICENTE FONT, OF HABANA, CUBA.

BUILDING STRUCTURE.

939,000. Specification of Letters Patent. **Patented Nov. 2, 1909.**

Application filed September 30, 1908. Serial No. 455,497.

To all whom it may concern:

Be it known that I, VICENTE FONT, a citizen of the Republic of Cuba, residing at Habana, Cuba, have invented certain new and useful Improvements in Building Structures, of which the following is a specification.

This invention relates to building structures and has for its object to provide a special structure of the blocks or filling elements in composite structures formed of metallic beams, between which are transversely placed said blocks or filling elements, increasing the solidity and resistance of said elements, especially at the points of support and means of securing the ends of the frames of the blocks over the beams, attaining in a convenient and economical manner an essentially light and rigid structure.

In describing the invention in detail reference is had to the accompanying drawings wherein like characters denote corresponding parts throughout the several views and in which—

Figure 1 is a longitudinal sectional view, between adjacent blocks, of a ceiling constructed in accordance with this invention. Fig. 2 is a top plan view broken away. Fig. 3 is a perspective view, partly in section, of a block or filling element supported, by one of its ends, upon a supporting beam, partly shown. Fig. 4 is a transverse section of the ceiling, in detail. Figs. 5 and 6 show a top view and a side elevation, respectively, of a detail.

Referring to the drawings, the construction comprises beams 1, preferably of I-shape, supported by their ends in any suitable manner (not shown) and between each pair of beams are placed the blocks or filling elements 2 which are of I-shape formation and made of concrete or any other suitable plastic material, and with covered ends. Each end of blocks is molded to form a back 3 to each side of body portion 4 to connect the top base 5 to bottom base 6 and beveled at each end of the top base 5 to form a ledge 7 so as to adjust said portion to the top base 8 of the supporting beams 1. The bottom base of the block is cut away to form a hanging ledge 9 and a projecting ledge 10 which extends farther than ledge 9, forming a recess 11 between each and which is adapted to receive the bottom base 12 of the supporting beam 1. By such arrangement the lower face of this base 12 is completely covered by the projecting ledges 10 of the blocks disposed at each side of the supporting beam. In this manner the metallic beam is protected against fire, being also without interruption the lower face of the ceiling.

Blocks 2 are constructed with a frame formed by a cable 13 embedded in the body portion 4 and positioned in a curvilinear manner and whose ends project from the upper part of each end of the block, being secured by means of plates 14, (Figs. 5 and 6), transversely extended over the top base 8 of the supporting beams 1 at a distance equal to that between the body portion of the filling elements 2. These plates 14 are of a length somewhat greater than the width of the top flange of the supporting beams 1. The ends which thus project from the edges of the latter are provided with holes 15 through which pass the ends of cables 13, these being intertwisted with the same.

After the blocks 2 have been mounted over the beams 1 and the ends of suspension cables 13 have been suitably secured, an uninterrupted layer of concrete or plastic material is placed so as to cover beams 1, blocks 2, plates 14 and the ends of the cables 13.

Other forms can be given to the ends of the blocks, within the essential feature of this invention, provided that the same are constructed with backs which will cover their ends and between which is comprised the supporting beam, obtaining in this manner a block structure improved, simple and very light and rigid, of I-shape.

What I claim is:

1. A building structure comprising I shaped supporting beams, I shaped filling blocks placed at each side of said beams and having their opposite ends supported upon the base of said beams, suspension cables embedded in the web of the I blocks and projecting from each end of the blocks, plates extending transversely over the beams and provided with holes through which the ends of the suspension cables are passed and secured, said blocks having the ends of their upper flanges beveled and being provided with vertical walls of plane surface connecting the top and bottom flanges together at their ends and having the ends of their lower flanges recessed to receive the lower flange of the supporting beams and a layer

of plastic material extending over the beams and blocks and embedding and securing the plates and projecting ends of the cables.

2. A building structure comprising supporting beams provided with a bottom base, filling blocks of I shape placed at each side of said beams and having their ends provided with vertical walls of plane surface connecting the top and bottom flanges together at their ends and having each lower corner cut away to form a hanging ledge 9 and a projecting ledge 10 forming a recess between them, the hanging ledge 9 of said blocks extending over the lower flange of the beams and said lower flange adjusting in the recess formed by the hanging and projecting ledges and the latter ledges 10 completely covering the lower flange of the beam, suspension cables embedded in the web of the blocks and projecting from the ends thereof, plates extending over the beams and provided with holes through which pass the ends of the suspension cables, being conveniently secured thereto and a layer of plastic material extending over the beams and blocks and embedding the securing plates and the ends of the suspension cables.

3. A building structure comprising supporting beams of I shape, filling blocks of I shape placed at each side of said beams and having their ends provided with vertical walls of plane surface connecting the top and bottom flanges together at their ends said vertical walls engaging with the web of the supporting beams, each block having an upper corner beveled to engage with the upper flange of the beams and each block having its lower corner cut away to form a hanging ledge 9 and a projecting ledge 10 which forms a recess between them, the top of the recess being beveled and said hanging ledges engaging with the lower flange of the beams, said flange adjusting itself in the recess formed by the hanging and the projecting ledges and said projecting ledges 10 covering the lower flange of the beams to the middle of the bottom base thereof, suspension cables embedded in the web of the blocks and projecting from the ends thereof, plates extending over the beams and provided with holes through which pass the ends of the suspension cables being conveniently secured, and a layer of plastic material extending over the beams and blocks and embedding the securing plates and the ends of the suspension cables.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

VICENTE FONT.

Witnesses:
RICARDO MARÉ,
VICTOR NORMAND.