

No. 818,884.

PATENTED APR. 24, 1906.

R. GRIMM.

SECTIONAL GIRDER AND COLUMN OF REINFORCED CONCRETE.

APPLICATION FILED JAN. 18, 1906.

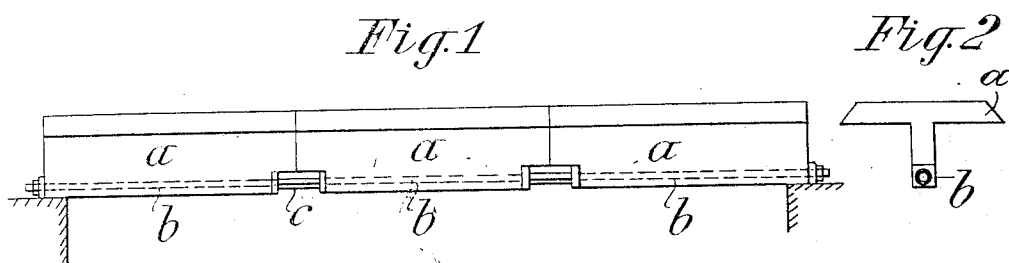
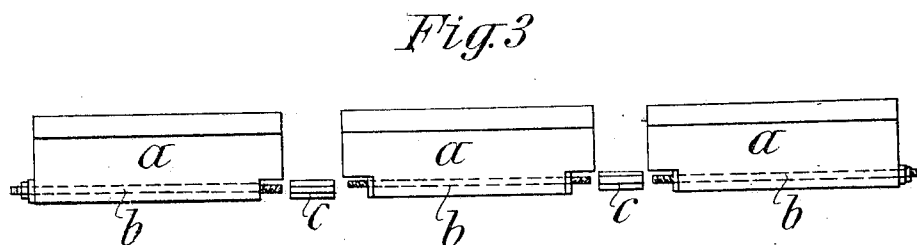


Fig. 4 *Fig. 5*

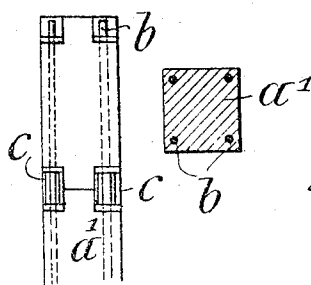


Fig. 6

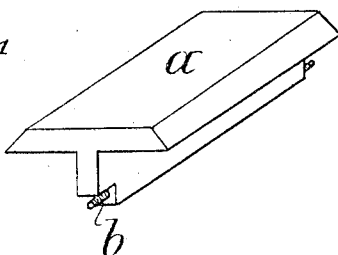
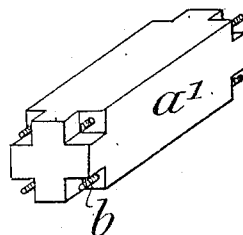


Fig. 7



Witnesses,

H. D. Kessler
C. D. Kessler

Inventor

Rudolf Grimm
By *James L. Young*
Att'y

UNITED STATES PATENT OFFICE.

RUDOLF GRIMM, OF VIENNA, AUSTRIA-HUNGARY.

SECTIONAL GIRDER AND COLUMN OF REINFORCED CONCRETE.

No. 818,884.

Specification of Letters Patent.

Patented April 24, 1906.

Application filed January 18, 1903. Serial No. 298,660.

To all whom it may concern:

Be it known that I, RUDOLF GRIMM, a subject of the Emperor of Austria-Hungary, residing at Vienna, Austria-Hungary, have invented certain new and useful Improvements in Sectional Girders and Columns Formed of Concrete Strengthened with Iron, of which the following is a specification.

This invention relates to sectional girders and columns formed of concrete strengthened with iron members, the sections of which can be readily put together and can be easily taken to pieces, and which sections may be manufactured in bulk and only put together at the place where they are used, the uniting into girders or columns being effected by simply connecting up the iron inlays. Such sectional parts are characterized by the fact that the concrete body at those places where the ends of the iron inlays are situated are formed with recesses during the molding process, so that the ends of these iron inlays are thus exposed and can be connected together by nuts screwed onto them or in any other suitable manner adapted to bring the girders or the column-sections into close contact.

Figures 1 and 2 of the accompanying illustrative drawings show in side view and end view, respectively, one construction of girder according to this invention. Fig. 3 shows the parts thereof disconnected one from the other. Figs. 4 and 5 show in elevation and section, respectively, a column according to this invention; and Figs. 6 and 7 show in perspective a portion or section of such a girder and a portion or section of such a column, respectively.

Each of the girder portions or sections *a* and the column portions or sections *a'* are formed of concrete strengthened by iron inlays *b* and are provided on their abutting faces with recesses in the concrete body corresponding in number to the iron inlays *b* and into which recesses the screw-threaded ends of the iron inlays project. These recesses may be produced during the shaping of the girder or column portions, for which purpose after inserting and fixing within the boarding mold into which the moist concrete is delivered the iron-bar inlays *b* and temporarily connecting them together by sockets hori-

zontal metal plates are laid between the side posts of the mold over the inlay tie-bars in positions corresponding to the recesses, and parallel to the longitudinal direction of the girder partition-walls of sheet-metal plates are then placed within the mold vertically to these metal plates, so as to keep the girder or column portions or sections apart. After this the concrete is placed in, and after it has hardened the several metal plates are removed, as well as the sockets temporarily connecting the bar inlays, so that the girder or the column comprises so many similar parts or sections.

For the purpose of connecting these girder or column sections on the spot where they are used there are preferably employed nuts with right and left handed threads screwed onto the adjacent ends of the iron inlays, so as to firmly draw together sections composing the girder or column with their abutting surfaces in close contact with one another, a constructional building part of practically uniform contour being thereby formed. By filling up the recesses with a binding agent, such as cement or the like, which protects the nuts, the appearance of a girder or column produced in one piece may be imparted to the connected sections. In case of necessity the girder or column may be easily taken apart into its several sections, which can be used again.

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

1. A girder or column formed of a plurality of concrete sections, metallic inlays arranged in each of the sections and having screw-threaded ends projecting from the sections, and means mounted upon said screw-threaded ends of the inlays for connecting the sections together.

2. A girder or column formed of a plurality of recessed sections, metallic inlays arranged in each of the sections and having screw-threaded ends projecting into the recesses of the sections, and means arranged in the recesses of the sections and engaging the screw-threaded ends of the inlays for connecting the sections together.

3. A girder or column formed of a plurality

of sections, metallic inlays arranged in each of the sections and having screw-threaded ends projecting from the section, and right and left hand threaded nuts mounted upon the
5 screw-threaded ends of the inlays for connecting the sections together.

In testimony whereof I have hereunto set

my hand in presence of two subscribing witnesses.

RUDOLF GRIMM.

Witnesses:

JOSEF RÜBASCH,
ALVESTO S. HOGUE.