No. 704,829. Patented July 15, 1902.

E. HUBER & A. MILMINE.

METAL FRAMEWORK FOR BUILDINGS.

(Application filed Mar. 4, 1902.)

(No Model.)

Fig. 1.

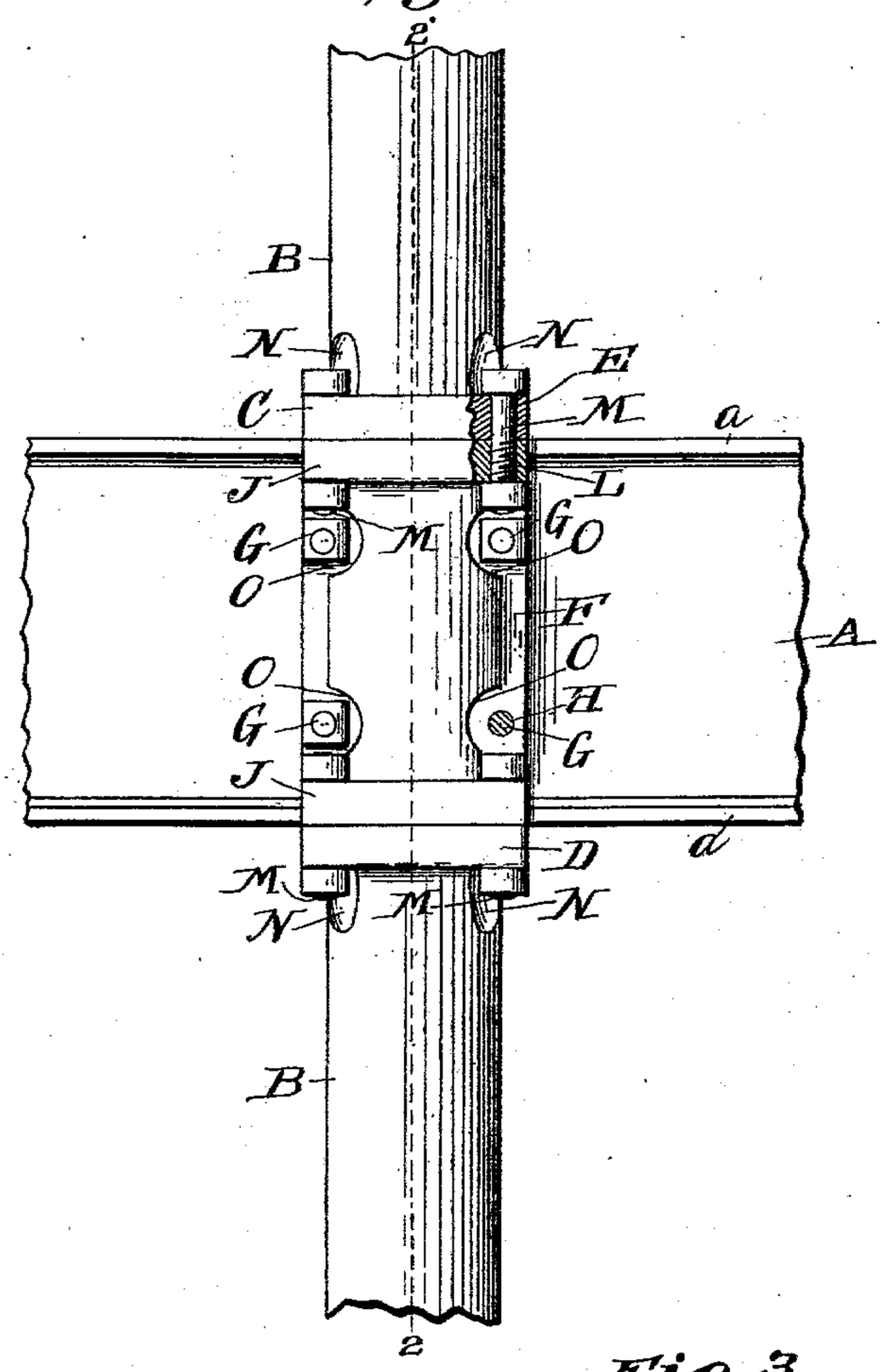


Fig. 2.

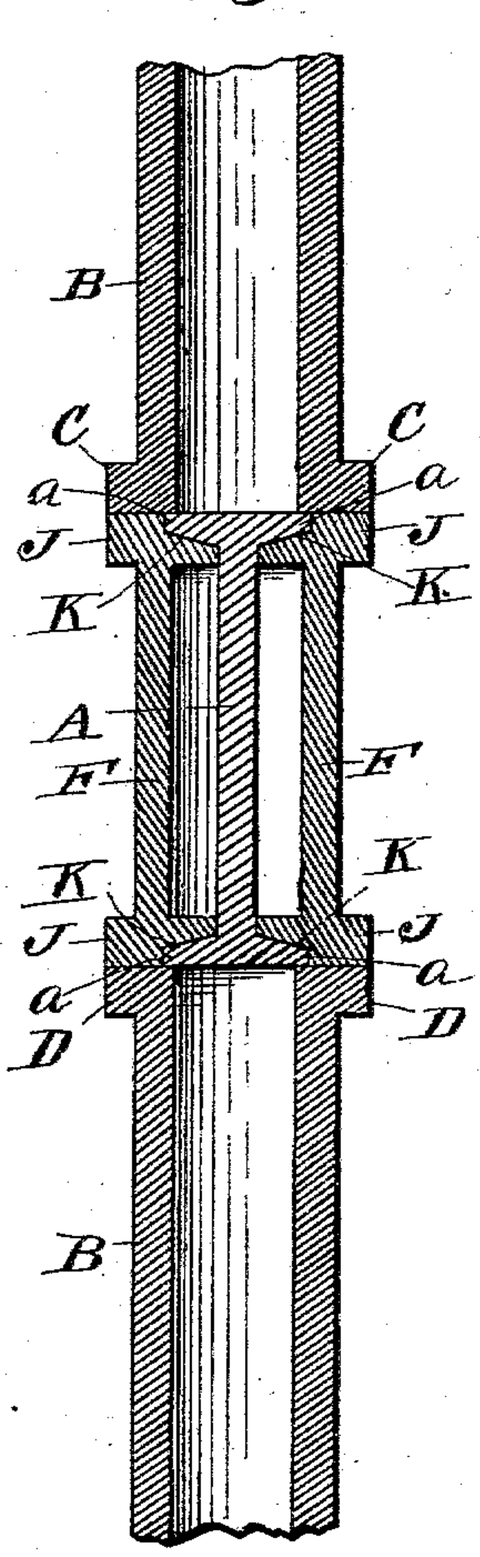
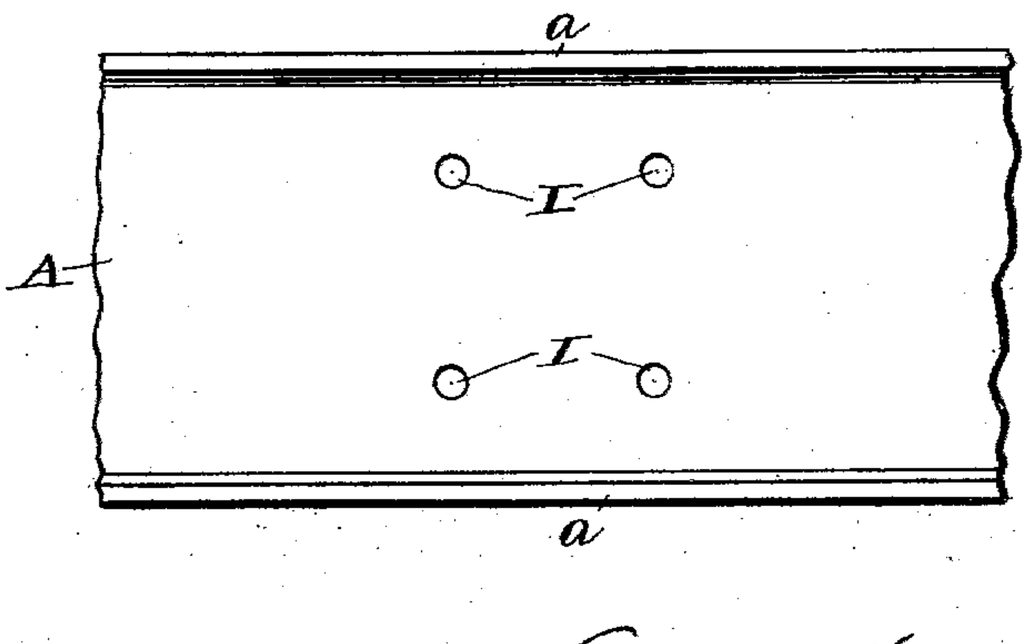


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

EDWARD HUBER, OF MARION, AND ALFRED MILMINE, OF TOLEDO, OHIO.

METAL FRAMEWORK FOR BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 704,829, dated July 15, 1902.

Application filed March 4, 1902. Serial No. 96,659. (No model.)

To all whom it may concern:

Be it known that we, EDWARD HUBER, of the city and county of Marion, and ALFRED MILMINE, of Toledo, in the county of Lucas, State of Ohio, citizens of the United States, have invented certain new and useful Improvements in Metal Frameworks for Buildings, of which the following is a specification.

Our invention relates to the construction of metal frameworks for buildings, and has for its object to provide means by which the I-beam girders may be made continuous from one end of the building to the other, while the columns are made in sections consisting of pillars of any desired shape, length, &c., between floors and blocks of a suitable shape to be secured on the two sides of the beam and having their tops and bottoms flanged to pass around the flanges on the beam and form surfaces to which the columns between floors may be secured.

In constructing metal frameworks for buildings at present the practice is to make the girders the length between columns and secure them in brackets in the sides of the column. As this method is faulty, because of the danger of the framework twisting on account of the short stretches of girders and the desirability of providing means whereby the girder may be made continuous, the advantages of of our invention will readily appear.

In the drawings, Figure 1 is a side view in elevation of parts of two columns and of an I-beam girder, showing the application of our invention; Fig. 2, a section on the line 2 2 of Fig. 1, and Fig. 3 a side view of a portion of a girder with the blocks removed.

Referring to the drawings, in which similar reference characters indicate corresponding parts throughout the several views, A represents an ordinary I-beam girder having the top and bottom flanges *a*.

B represents the column employed between floors, having the base and crown pieces C D made integral therewith, the base and crown pieces being formed with holes E to receive bolts for the purpose hereinafter specified.

F represents a block formed to fit between the flanges on each side of the I-beam and secured thereto by means of bolts G, passing through holes H in the sides of the plate, holes I in the I-beam, and through holes in the plate on the opposite side of the beam. In order to connect the columns on the top and bottom of the beam, the block F is formed with a flange J at each end, that extends outwardly and to the level of the upper or lower surface of the flanges *a*, having grooves K formed therein to snugly fit said flanges *a*. The flanges J are formed with holes L, adapted to register with the holes E in the base and crown pieces C D and fastened thereto by means of bolts M, passing through holes L and E.

In the drawings we have shown the columns B cylindrical in shape, with square crowns and bases, and the blocks F formed with a segmental center to carry out a continuation of the cylindrical column, the column having recesses N formed therein to permit the nuts on the bolts M fastening the column B to the block F to be turned, and recesses O, formed in the segmental centers of the blocks, to permit turning of bolts G in securing the plates to the I-beam A; but we do not wish to be confined to this structure, as the shape of the columns B and design of the blocks F may be altered in any manner found desirable without affecting the spirit of our invention. It will also be apparent that the holes I in the I-beam girder and H in the blocks may be dispensed with, if desired, in order to allow for the expansion and contraction of the girder in structures subjected to excessive extremes of heat and cold without departing from the spirit of our invention.

Having thus described our invention, what we claim is—

1. In a metal framework for buildings, blocks fitted on the sides of the girders to form supports for columns between floors, substantially as shown and described.

2. In a metal framework for buildings, blocks fitted on the sides of the girders, and projecting flanges at the extremities of said blocks to form connecting-surfaces for the supporting-columns, substantially as shown and described.

3. In a metal framework for buildings, blocks fitted on and following the contour of the girders to form supports for the columns between floors, substantially as shown and described.

4. In a metal framework for buildings, blocks fitted on and following the contour of the girders, and flanges at the extremities of the blocks to form connecting-surfaces for the supporting-columns, substantially as shown and described.

5. In a metal framework for buildings, continuous I-beam girders, columns to support said girders intermediate of their ends, and blocks to fit on each side of said girders so formed as to provide supports for the crowns and bases of said columns, substantially as shown and described.

6. In a metal framework for buildings, continuous I-beam girders, columns to support said girders intermediate of their ends, blocks to fit on each side of said girders, and projecting flanges on said blocks to form surfaces to connect with the crown or base of said columns, substantially as shown and described.

7. In a metal framework for buildings, continuous I-beam girders, blocks secured to each side of said girders, a projecting flange at each end of said block having a recess to receive the flange on one side of said I-beam, and a column secured to the flange on said block, substantially as shown and described.

8. In a metal framework for buildings, continuous I-beam girders, columns to support said girders, blocks to fit on each side of said girders shaped to represent continuations of said columns, and a projecting flange at each end of said block having a recess to receive the flange on said I-beam, the flanges on said blocks forming connecting-surfaces for said columns, substantially as shown and described.

In testimony whereof we hereto affix our signatures in the presence of two witnesses.

EDWARD HUBER.
ALFRED MILMINE.

Witnesses as to Edward Huber:
JOHN J. CRAWLEY,
J. ROSTEN CURTIS.

Witnesses as to Alfred Milmine:
GEO. E. MYERS,
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