E. McL. LONG.

CONCRETE GIRDER.

APPLICATION FILED APR. 4, 1919.

1,320,072.

Patented Oct. 28, 1919.

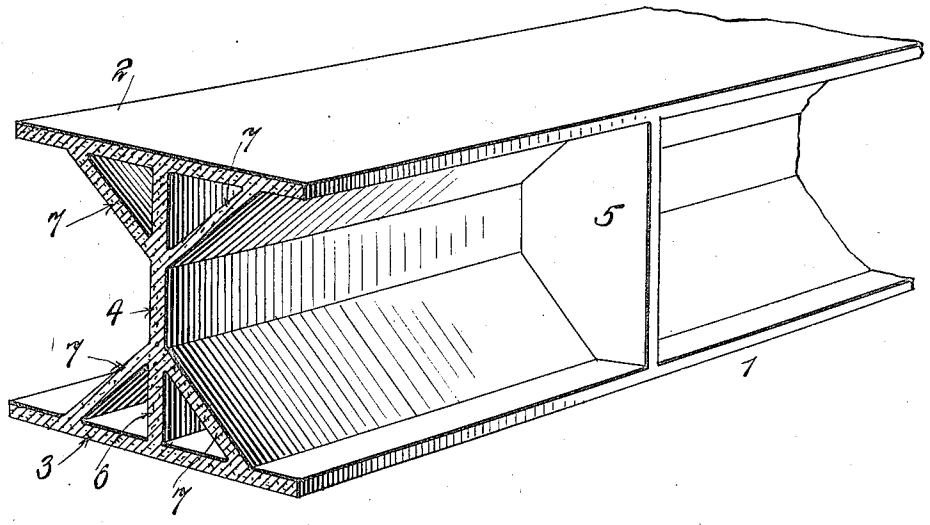


Fig. 2.

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CONCRETE GIRDER.

1,320,072 Specification of Letters Patent. Patented Oct. 28, 1919.

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To all whom it may concern:

Be it known that I, EUGENE McLEAN LONG, a citizen of the United States, and a resident of the city, county, and State of New York, (whose post-office address is 120 Broadway, New York city,) have invented a new and useful Improvement in Concrete Girders, of which the following is a specification.

The object of my invention is to provide a concrete girder with a maximum strength and a minimum amount of material, which may be made either with or without reinforcement. This and other objects are accomplished by my invention, one embodiment of which is hereinafter more particularly set forth.

For a more particular description of my invention, reference is to be had to the accompanying drawing, forming a part hereof, in which the figure is a perspective sectional view of one form of girder.

My improved girder 1 is composed of upper and lower flanges 2 and 3 respectively, which are connected by connecting webs 4 and stiffeners 5 where great strength is desired. The connecting webs 4 may be made in any of several forms but the preferred one is where there is a vertically disposed web 6 which runs from the flange 2 to the flange 3, and extending diagonally are the connecting webs 7.

The stiffeners 5 prevent any tendency toward bending or buckling horizontally and coöperate with the connecting webs to prevent any bending or buckling of any kind. The result obtained by all the webs is a beam which may be made large enough for a railway bridge or small enough for a floor or in any other desired size. In whatever size the beam may be made and wherever it may be used, it is always found to have a maximum of strength and a minimum of weight of material.

While I have shown and described one embodiment of my invention, it is obvious that it is not restricted thereto, but is broad enough to cover all structures that come within the scope of the annexed claims.

Having thus described my invention, what I claim is:

1. A concrete girder composed of horizontally disposed flanges, a vertically disposed web connecting said flanges and diagonally disposed webs connecting the flanges and vertical web.

2. A concrete girder composed of parallel flanges, a vertically disposed web connecting said flanges, diagonally disposed webs connecting the vertical web with the flanges, and stiffeners connecting all webs and flanges and disposed at right angles thereto.

EUGENE McLEAN LONG.