No. 826,042. PATENTED JULY 17, 1906.

J. N. LOVELEY.

BEAM.

APPLICATION FILED JAN. 11, 1906.

Fig. 1.

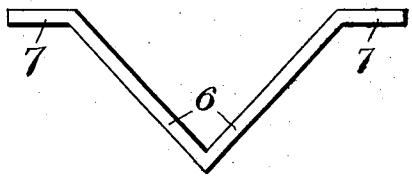


Fig. 2.

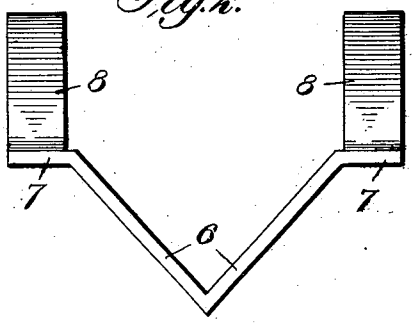


Fig. 3.

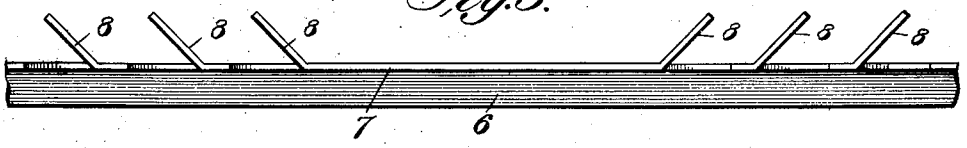


Fig. 4.

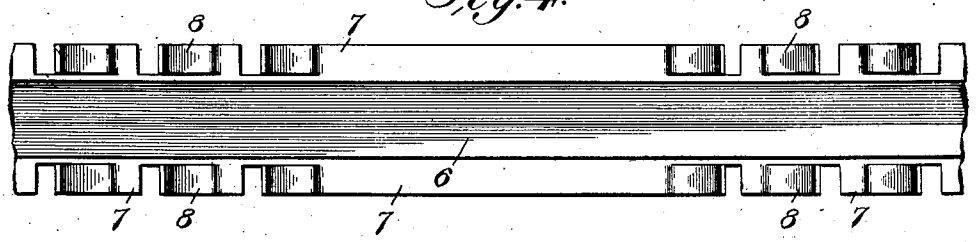
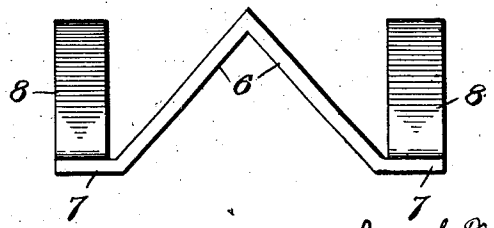


Fig. 5.



Witnesses

W. A. Durand

Geo. E. Terw

Inventor

Joseph N. Loveley,

By Milo B. Stevens & Co.

Attorneys.

UNITED STATES PATENT OFFICE.

JOSEPH N. LOVELEY, OF DETROIT, MICHIGAN.

BEAM.

No. 826,042. Specification of Letters Patent. Patented July 17, 1906.

Application filed January 11, 1906. Serial No. 295,631.

To all whom it may concern:

Be it known that I, JOSEPH N. LOVELEY, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Beams, of which the following is a specification.

This invention is a metallic bar particularly designed and adapted for use as a truss to reinforce concrete structures, particularly concrete floors, beams, arches, and such structural parts.

The object of the invention is to form an improved beam characterized by great strength in proportion to the weight and having means to hold it in place in the concrete structure.

I am aware that it is old in the art to use a flat bar with arms struck up therefrom. This construction is deficient in strength to resist bending strain, lacking the necessary stiffness or resistance except by the use of heavy metal.

In my invention I provide an angle-bar of novel shape having arms struck up therefrom, as will more fully hereinafter appear. This construction gives greater strength and rigidity in proportion to the weight of the metal.

In the accompanying drawings, Figure 1 is an end view of the bar or blank unsheared from which the beam is made. Fig. 2 is a similar view of the beam with the arms struck up therefrom. Fig. 3 is a side view of the beam. Fig. 4 is a plan view. Fig. 5 is an end view of a modification, the arms being struck up in opposite direction to that shown in Fig. 2.

The beam consists of a metal plate or bar rolled or otherwise shaped to an angular or V form, as indicated at 6 in the drawings. At each edge of the bar the metal is offset or rolled in a plane parallel to the base of the angle, forming wings 7, from which the arms 8 are struck up by shearing said wings with an L-cut and bending up the arms so formed. As shown in Figs. 3 and 4, the middle of the bar is preferably left unsheared, the arms being located at the ends and being inclined in opposite directions at each end respectively. In the form shown in Fig. 2 the arms are bent up on the side of the beam opposite the angle. In Fig. 5 they are bent up beside the angle. The angular construction makes a very stiff bar in proportion to the weight of the metal. As stated, the bars as ordinarily used will be embedded in concrete, the arms 8 serving to bind tight the plastic material to the bar to form the complete beam or girder.

I claim—

A structural metal beam angular in cross-section and offset at each edge in a plane parallel to the base of the angle, and having arms sheared and struck up at its opposite side edges from said offset portions.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH N. LOVELEY.

Witnesses:
WM. HENRY GALLAGHER,
ALBERT J. REEBER.