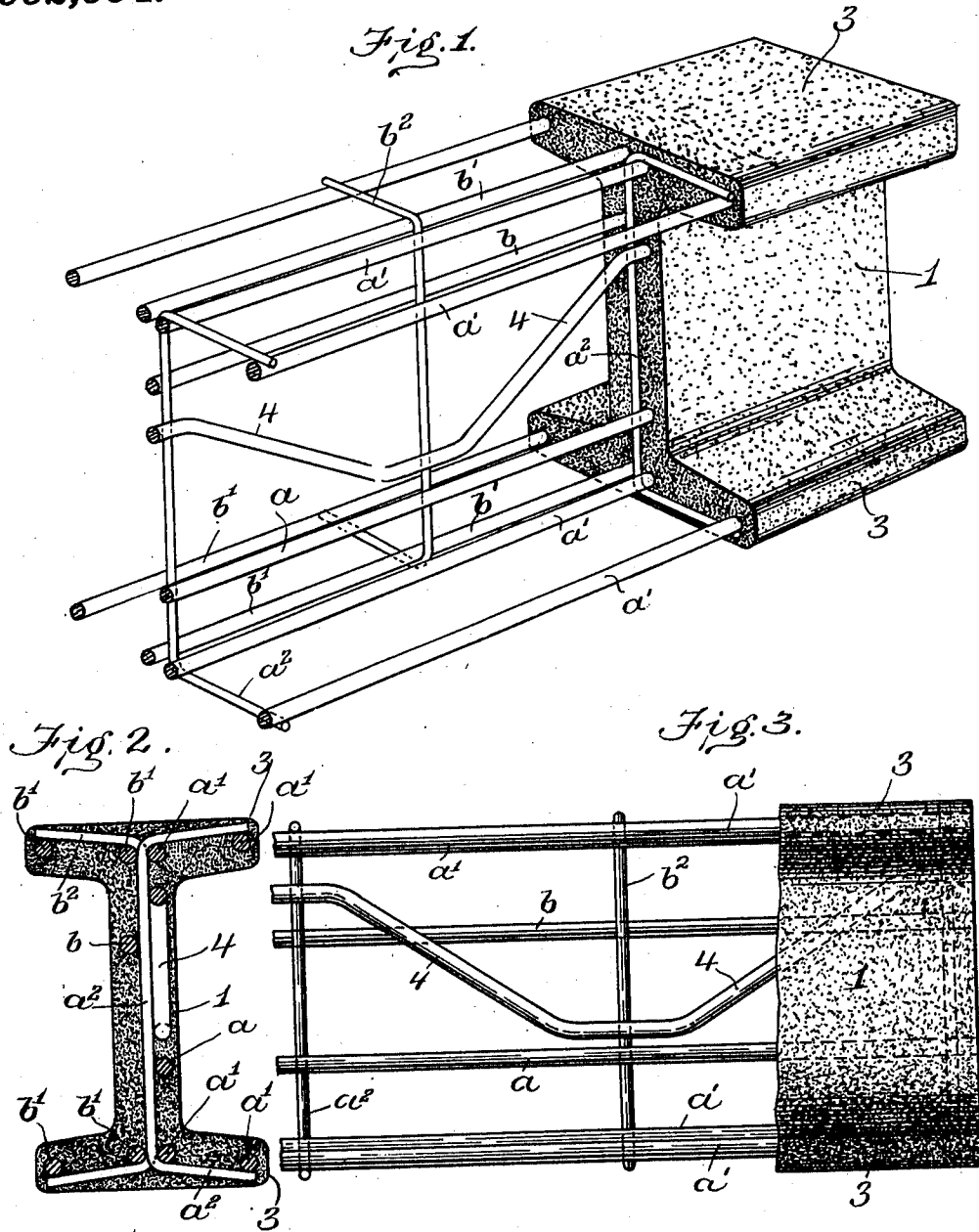


H. L. SMITH.
 REINFORCED I-BEAM.
 APPLICATION FILED MAR. 4, 1910.

992,994.

Patented May 23, 1911.



Witnesses:
 H. L. Robbins -
 P. A. Pezzetta

Inventor:
 Herbert L. Smith
 by *Wm. L. May*
 Atty.

UNITED STATES PATENT OFFICE.

HERBERT L. SMITH, OF CLINTON, MASSACHUSETTS, ASSIGNOR TO CLINTON WIRE CLOTH COMPANY, OF BOSTON, MASSACHUSETTS.

REINFORCED I-BEAM.

992,994.

Specification of Letters Patent.

Patented May 23, 1911.

Application filed March 4, 1910. Serial No. 547,259.

To all whom it may concern:

Be it known that I, HERBERT L. SMITH, of Clinton, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Reinforced I-Beams, of which the following is a specification.

This invention relates to an improvement in reinforced I-beams.

Figure 1 is a perspective view of an I-beam constructed in accordance with my invention. Fig. 2 is an end elevation of Fig. 1. Fig. 3 is a side elevation of the same.

As shown, the web 1, of the concrete part of the I-beam has incorporated in it two sets of longitudinal rods a , b , each set comprising one or more, according to the length or size of the web. Each flange of the I-beam is in like manner provided with one or more sets of horizontal rods a' , a' , b' , b' .

While in the drawings each flange 3, 3, of the I-beam is shown as equipped with two longitudinal rods b' , and two longitudinal rods a' , this number may be varied to suit the size and style and further requirements of the I-beam. The rods a , a' at regular intervals are tied together by cross-rods a^2 , which are electrically welded to the rods a , a' . In like manner the rods b , b' are joined together by cross-rods b^2 , electrically welded to the rods b , b' , at the points of contact or intersection. While but one cross-rod b^2 is shown in the drawings, it is understood that there are a number of such cross-rods and the size will vary according to the size and style of the I-beam. It will further be observed that the cross-rods a^2 , are also welded to the web rods b , while the cross-rods b^2 are in like manner welded to the web rods a .

4 represents a truss rod, of which there may be any number welded to the cross-rods a^2 , b^2 , at points of contact or intersection. This truss rod may be staggered in the form shown in the drawings, or in any desired way, depending upon the size and style of the I-beam and the requirements of the particular beam being constructed, it being understood that such truss rod 4 is incorporated in the web 1 of the I-beam, together with the rods a and b , and electrically welded to said rods a and b , if desired. Further, said truss rod, if desired, may be electrically welded or bonded to any one of the rods a and b .

Having thus explained the nature of my invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made, or all of the modes of its use, what I claim and desire to secure by Letters Patent is:

A reinforced I-beam comprising in its construction two sets of longitudinal web rods, two separate sets of longitudinal flange rods, two sets of cross-rods, each of which is welded to one set of flange rods and to both sets of web rods at the points of contact or intersection, a truss rod extending lengthwise of the web and welded to the cross-rods at the points of contact or intersection, and a body of concrete inclosing the said rods forming therewith a reinforced I-beam.

In testimony whereof I have affixed my signature, in presence of two witnesses.

HERBERT L. SMITH.

Witnesses:

CHARLES MARBERRIE,
PEARL KINNENAR.