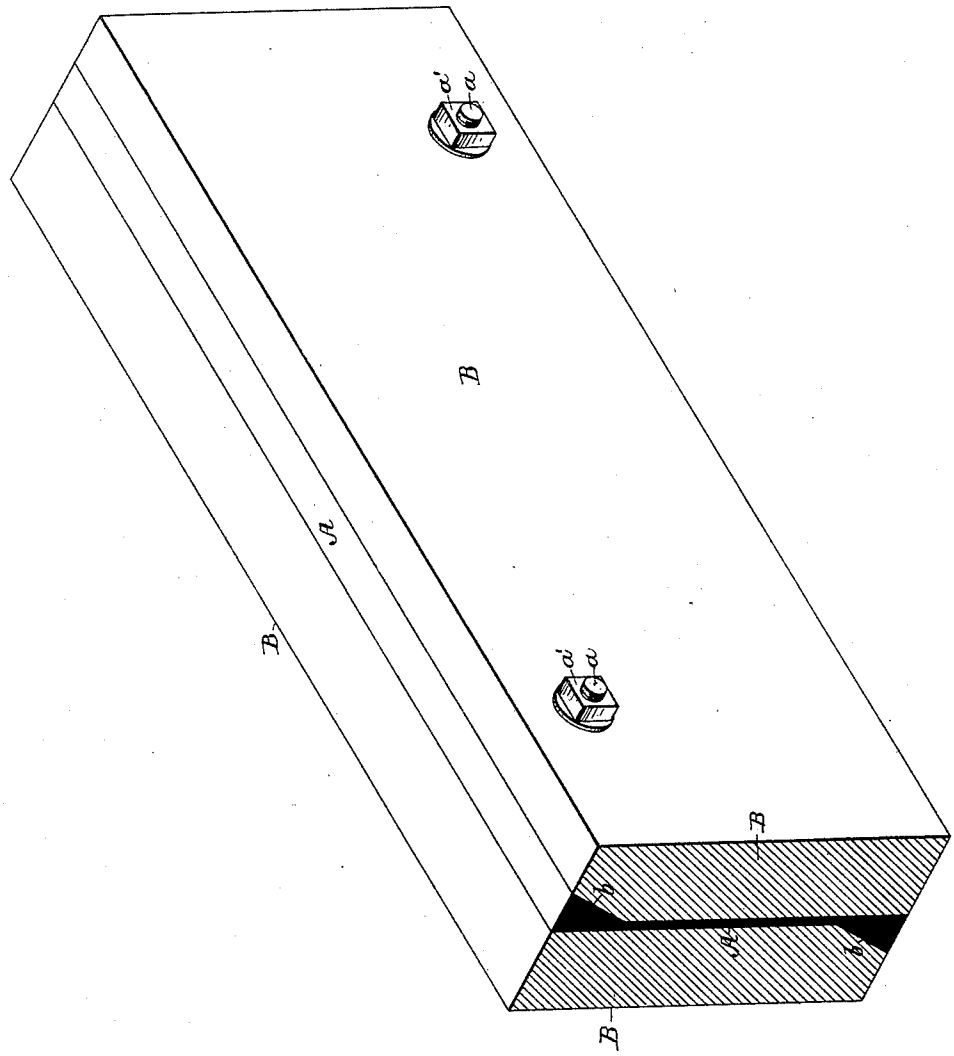
(No Model.)

J. D. LAZELL.

COMPOSITE GIRDER.

No. 424,798. Patented Apr. 1, 1890.



Witnesses:
Murray C. Boyer
A. V. Groupe

Inventor:
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UNITED STATES PATENT OFFICE.

JAMES D. LAZELL, OF PHILADELPHIA, PENNSYLVANIA.

COMPOSITE GIRDER.

SPECIFICATION forming part of Letters Patent No. 424,798, dated April 1, 1890.

Application filed January 25, 1890. Serial No. 338,111. (No model.)

To all whom it may concern:

Be it known that I, JAMES D. LAZELL, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Composite Girders, of which the following is a specification.

My invention consists of an improvement in that form of composite girders known as "Flitch" girders, in which a metal plate is clamped between flanking beams of wood, the object of my invention being to so construct a girder of this character that without materially increasing the expense of the same its strength may be considerably augmented. This object I attain in the manner hereinafter set forth, reference being had to the accompanying drawing, which represents a sectional perspective view of a composite girder constructed in accordance with my invention.

The girder comprises the central plate or beam A, of iron or steel, and flanking beams B, of wood, fitting snugly to said central metallic beam and firmly clamped thereto by means of bolts *a* and nuts *a'*, disposed at appropriate intervals throughout the length of the beam or girder. At and near each edge the central metallic beam A is thickened, so as to form a beveled rib *b*, whereby the longitudinal stiffness or rigidity of the metal beam is materially increased as compared with a flat plate-beam, this increase in rigidity of the metallic beam being effected without materially increasing the labor or expense of fitting the flanking beams of wood thereto, as the simple chamfering of one corner of each of said wooden beams, so as to impart thereto a bevel similar to that of the rib *b*, is all that is necessary in order to insure the snug fitting of said flanking beams to the central metallic beam of the girder. The beveled ribs *b* can, moreover, be produced upon the beam A with very slight changes in the ordinary rolls which are required to produce an ordinary flat bar or plate; hence the expense of the beam, with its beveled ribs, is but little more than that of said plain flat bar or plate and much less than that of an I-bar or other form of shaped or structural iron or steel beam.

Having thus described my invention, therefore, I claim and desire to secure by Letters Patent—

The within-described composite girder, consisting of a central metallic beam having beveled ribs at the opposite edges, and flanking beams of wood, having their corners chamfered to fit snugly to the beveled ribs of the metal beam, substantially as specified.

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

JAMES D. LAZELL.

Witnesses:
EUGENE ELTERICH,
HARRY SMITH.