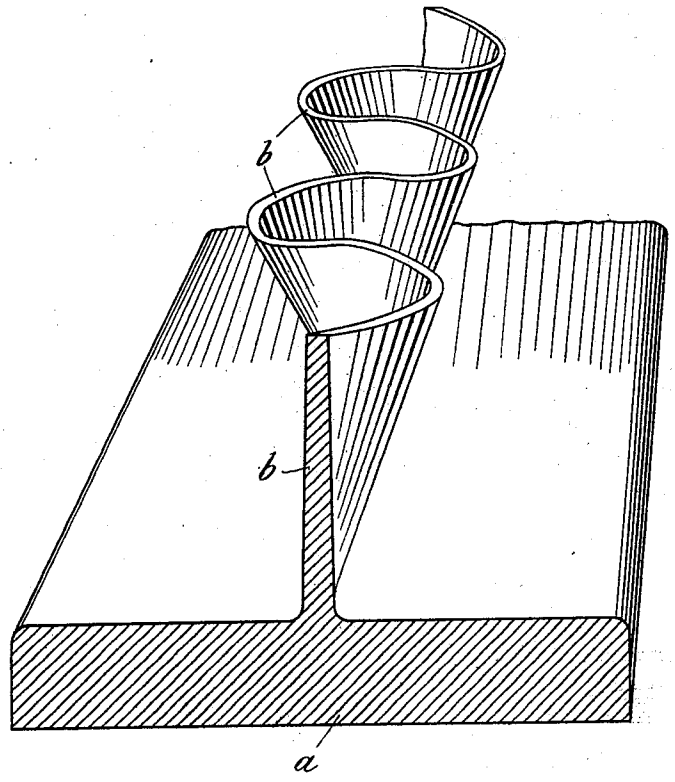
No. 749,987. PATENTED JAN. 19, 1904.

T. FRANKE.

I-IRON BEARER FOR CONCRETE STRUCTURES.

APPLICATION FILED SEPT. 2, 1903.

NO MODEL.



Witnesses:
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 749,987. Patented January 19, 1904.

UNITED STATES PATENT OFFICE.

THEODOR FRANKE, OF BERLIN, GERMANY.

⊥-IRON BEARER FOR CONCRETE STRUCTURES.

SPECIFICATION forming part of Letters Patent No. 749,987, dated January 19, 1904.

Application filed September 2, 1903. Serial No. 171,696. (No model.)

To all whom it may concern:

Be it known that I, THEODOR FRANKE, a subject of the German Emperor, residing in Berlin, in the Kingdom of Prussia, Germany, have invented certain new and useful Improvements in ⊥-Iron Bearers for Concrete Structures, of which the following is a specification.

As is well known, the adhesion between concrete and iron is by no means very great, so that in concrete-iron structures the two materials in the course of time separate under loads lying far below the actual bearing strength of the structure. For this reason various attempts have of late been made to overcome the defect by giving the bearers such forms as prevent or greatly diminish the risk of their separating from the surrounding concrete.

My invention relates to improvements in the simple and therefore cheap ⊥-iron bars, whereby they are rendered thoroughly suitable for use as bearers for concrete structures of all kinds, and more especially for concrete ceilings.

The accompanying drawing shows a portion of my improved bearer in perspective.

According to my invention the web *b* of the ⊥-bearer *a* is given a sinuous or corrugated form, the corrugations increasing in size as they approach the outer edge of the web. Such a web cannot separate from the concrete in which it is embedded, even when the actual adhesion between the two materials is destroyed. It cannot separate in the longitudinal direction of the bar because of the corrugations engaging in the concrete, and it cannot separate in the direction downward from the concrete because iron and concrete are, as it were, dovetailed together. The connection therefore cannot be destroyed unless the body of concrete is actually completely disturbed, a case the ocurrence of which in practice is scarcely to be assumed.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A ⊥-iron bearer for concrete structures, the web of which is corrugated, the said corrugations increasing in size toward the outer edge of the web, substantially as described.

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

THEODOR FRANKE.

Witnesses:
HENRY HASPER,
WOLDEMAR HAUPT.