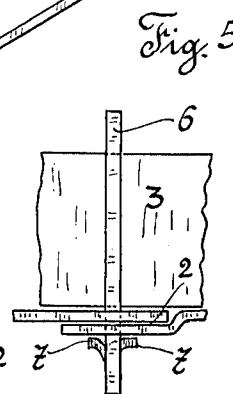
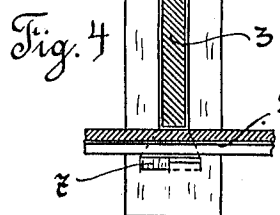
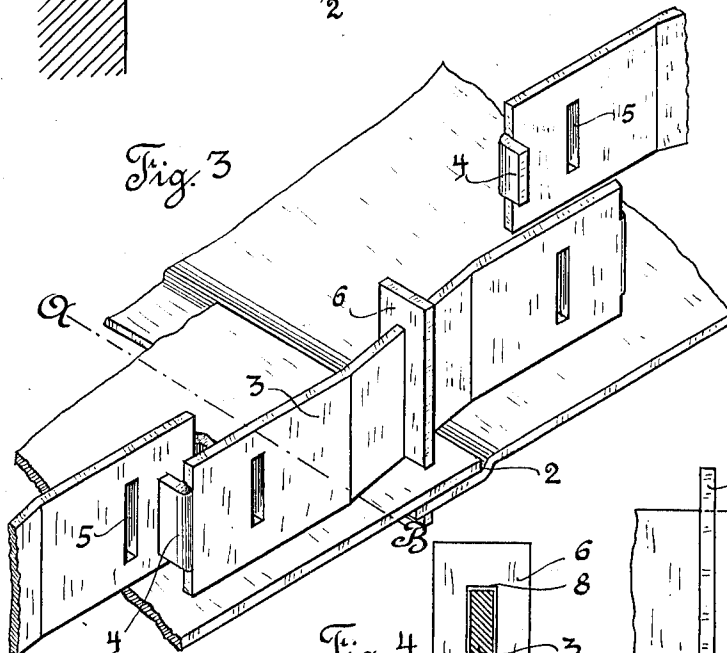
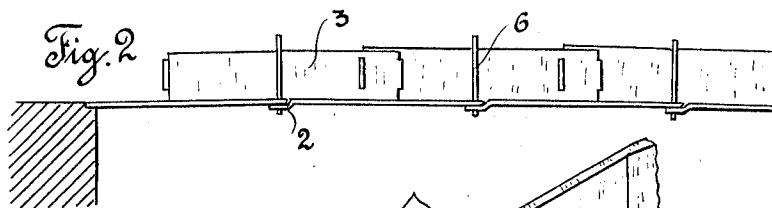
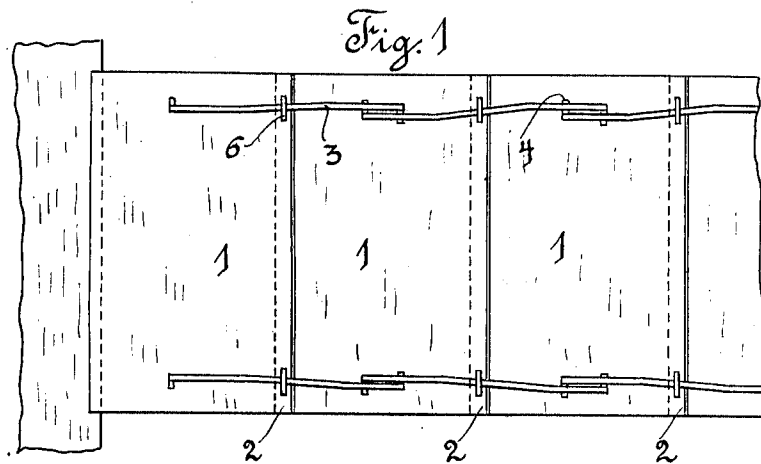


1,019,655.

T. KALLA.
SUSPENDED BRIDGE.
APPLICATION FILED APR. 24, 1911.

Patented Mar. 5, 1912.



Witnesses
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UNITED STATES PATENT OFFICE.

THOMAS KALLA, OF OPPELN, GERMANY.

SUSPENDED BRIDGE.

1,019,655.

Specification of Letters Patent.

Patented Mar. 5, 1912.

Application filed April 24, 1911. Serial No. 623,123.

To all whom it may concern:

Be it known that I, THOMAS KALLA, a subject of the King of Prussia, residing at Oppeln, in the Kingdom of Prussia, Germany, have invented certain new and useful Improvements in Suspended Bridges, of which the following is a specification.

This invention relates to a flying-bridge which is particularly destined for military purposes and which can be rapidly constructed and removed.

The improved bridge is composed of a certain number of slightly curved plates having at the corners slots running perpendicularly to the longitudinal axis of the bridge. The front end of each plate is slightly bent at right angles so that the plates when put together overlap, the slots of the two consecutive plates registering. Vertical piles are pushed from below through said registering slots of the plates. The piles have shoulders butting against the lower surface of the elements and they further have vertical slots for the reception of the girders which are placed on edge. The consecutive girders are connected so that they form together uninterrupted lateral side beams supporting said plates. The structure thus obtained is of great supporting power and particularly adapted for military purposes as the elements made of not very heavy sheet metal can be easily transported. The several elements are mounted together on the bank of the river and the finished bridge is pulled over to the other bank.

The invention is illustrated by way of example in the accompanying drawings.

Figure 1 shows one end of the improved flying bridge in plan. Fig. 2 is a side elevation of Fig. 1. Fig. 3 shows on a larger scale how the plates, the piles and the girders are connected. Fig. 4 is a section on line A—B of Fig. 3 taken at right angles to the girders. Fig. 5 is an enlarged side elevation similar to Fig. 2 of the adjacent plates.

The plates 1 of sheet metal are slightly

curved and the front end 2 of each plate is bent at right angles so that it forms a flange for the reception of the next following plate 1. The plates 1 have transverse slots in each corner designed to receive the vertical piles 6, the shoulders 7 of said piles supporting the plates 1. This connection of the elements is already strong but not sufficiently so for bridges of considerable span. To further increase the security of connection of the structure the girders 3 are used which are composed of separate parts placed in the vertical slots 8 of the upper ends of the piles 6 so that the girders stand on edge to the plates 1. The girders have at their ends arms 4 bent at right angle and slots 5, the arms of one girder engaging with the slots of the next girder. The deflection-strain exerted upon said girders is uniformly distributed by the arm and slot connection to all the parts of the side cheeks of the bridge.

I claim:—

An improved flying bridge comprising in combination plates of sheet metal slightly curved and having transverse slots in the corners, the front end of each plate bent downward at right angles to form a flange, vertical piles placed through the registering slots of two superposed plates and having a vertical slot at the upper end, a shoulder on said piles for supporting the plates, girders placed on edge upon said plates and engaging with said vertical slots of the piles, said girders having vertical slots near their end, and arms at the ends of said girders bent at right angles and engaging with the slots of the consecutive girders, substantially as described and shown and for the purpose set forth.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

THOMAS KALLA.

Witnesses:

LENETT KATTY,
FRANZ GELLNEZ.