

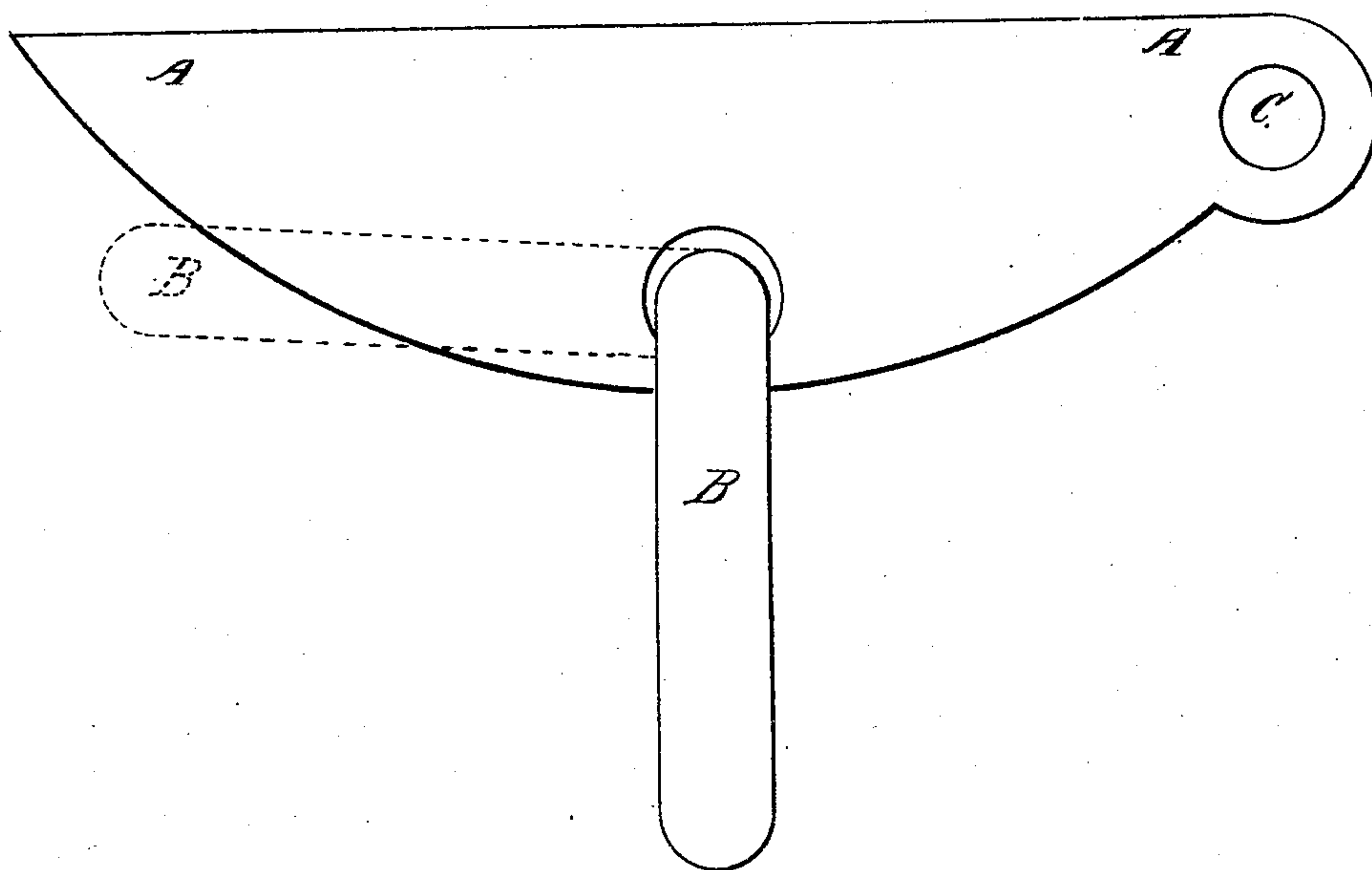
E. EVANS.

Improvement in Rafting-Chain Toggles.

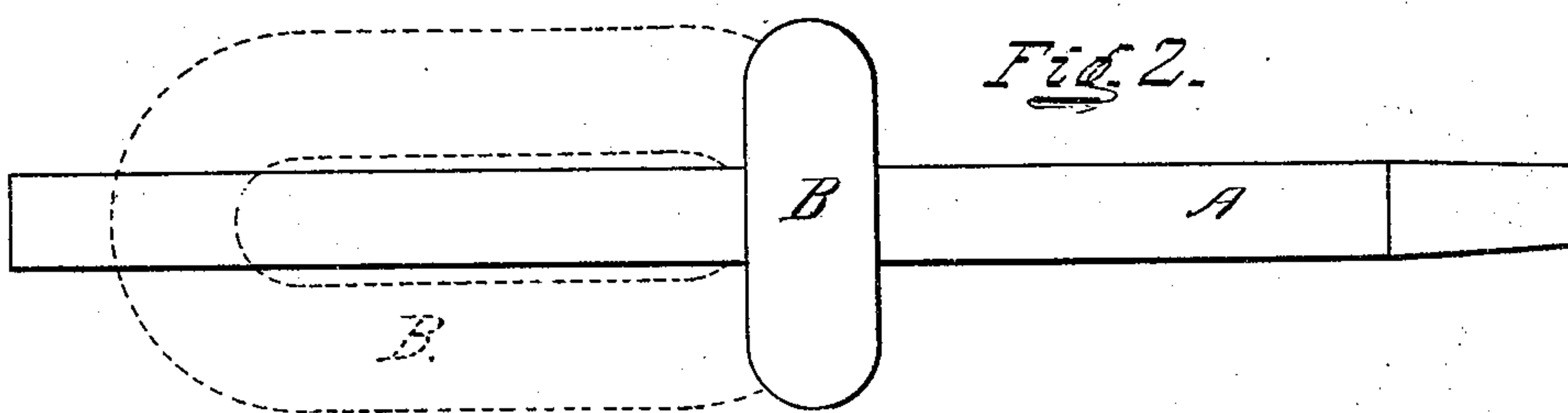
No. 130,363.

Patented Aug. 13, 1872.

*Fig. 1.*



*Fig. 2.*



Witnesses

Wm. McLaren,  
J. S. Pettit

Inventor.

Edward Evans

# UNITED STATES PATENT OFFICE.

EDWARD EVANS, OF NORTH TONAWANDA, NEW YORK.

## IMPROVEMENT IN RAFTING-CHAIN TOGGLES.

Specification forming part of Letters Patent No. **130,363**, dated August 13, 1872.

Specification describing certain Improvements in Fastenings for Rafting-Chains, invented by EDWARD EVANS, of North Tonawanda, in the county of Niagara and State of New York.

This invention consists of a cross-bar, provided with an eye at one end, and curved on one side thereof at either or both ends, adapted to be used in connection with the end of a rafting-chain, so as to permit the link of the chain to swing in its bearings, and assume a position in line with the said cross-bar, whereby the chain is conveniently manipulated and passed with ease and facility through holes in the logs, and thereby readily coupling the logs together to form a raft.

In the drawing, Figure 1 is a side elevation of my improved cross-bar for rafting-chains. Fig. 2 is a bottom view of the same.

A represents the improved cross-bar, one side terminating in the eye C, and the opposite side being curved to permit a link, B, connected to the cross-bar, to swing in its bearings, and assume a parallel position to the cross-bar, by which means the chain may be passed, with ease and facility, through openings in the logs to form a raft. The eye C is for the purpose of attaching a rope or lanyard, by which the cross-bar, with the chain attached, may be drawn through the openings in the logs of the raft.

The cross-bar may be made of wrought, cast or malleable iron, preferably of the form shown in the drawing; but it is apparent that it may be made square at the eye end, but is not so efficient and desirable as when the side is curved, as shown. When a straight-sided bar, with chain attached, is drawn through the openings in the logs it is apt to jam or catch, and the operation is retarded. This is obviated by curving one of the sides.

By the use of my improved cross-bar, the expense of shackles, bolts, and keys, now in general use, is obviated. It is a much safer fastening, and does not wear the timber as do the shackles, and a firm and substantial raft is produced; and it is not liable to be lost, as it is at all times connected to the chain.

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

The cross-bar A, provided at one side with an eye, C, for attaching a rope, and curved at either or both ends, when combined with a rafting-chain, substantially as and for the purpose described.

EDWARD EVANS.

Witnesses:

WM. McLAREN,  
ISAAC PETTIT.