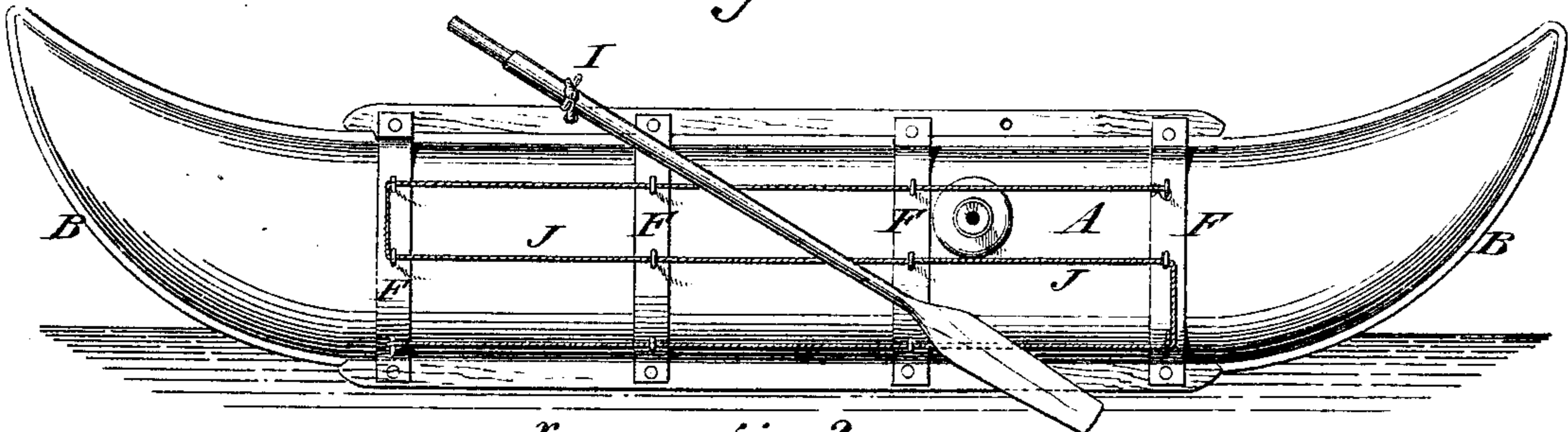


J. RIDER.  
LIFE-RAFTS.

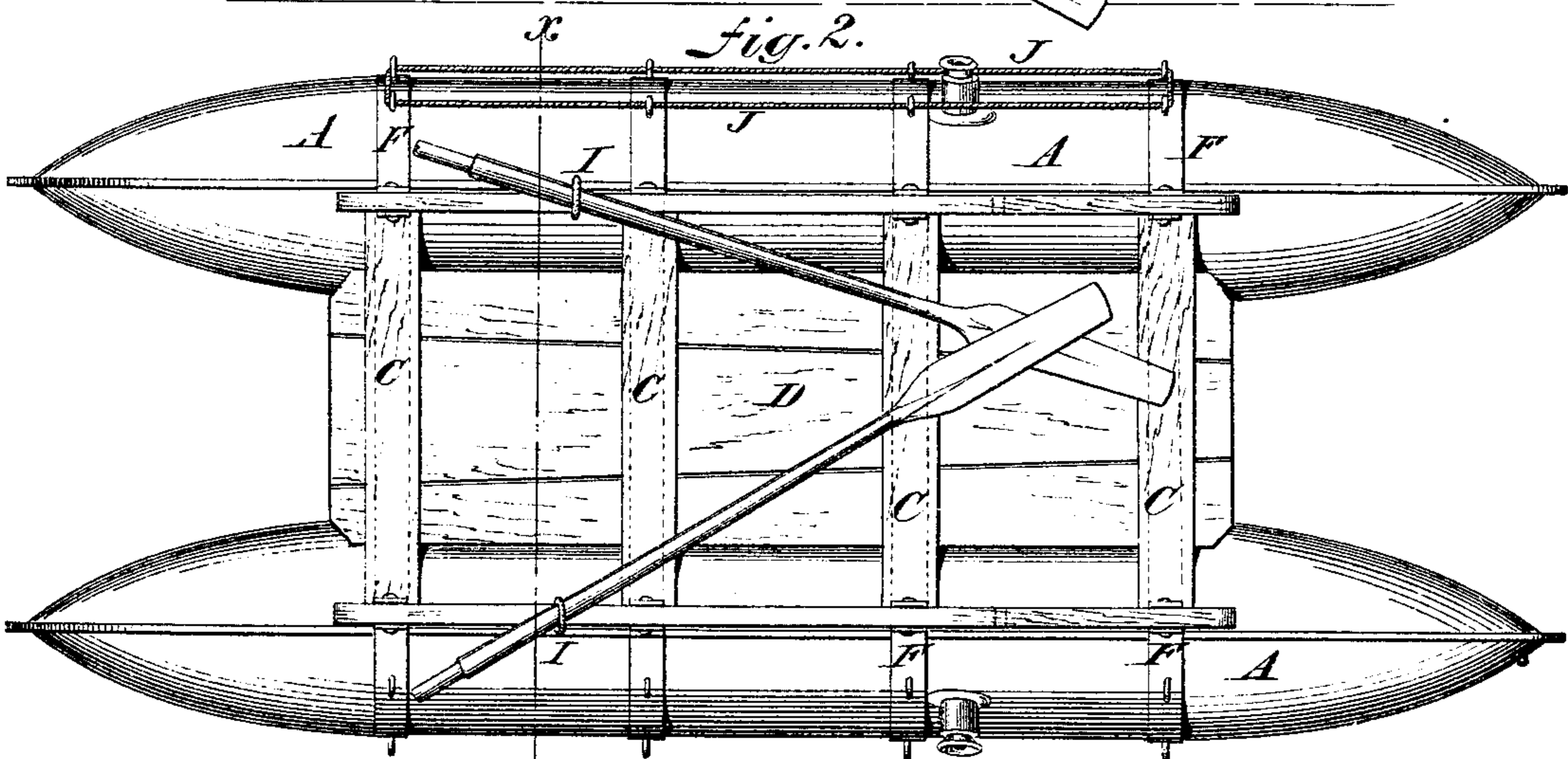
No. 183,777.

Patented Oct. 31, 1876.

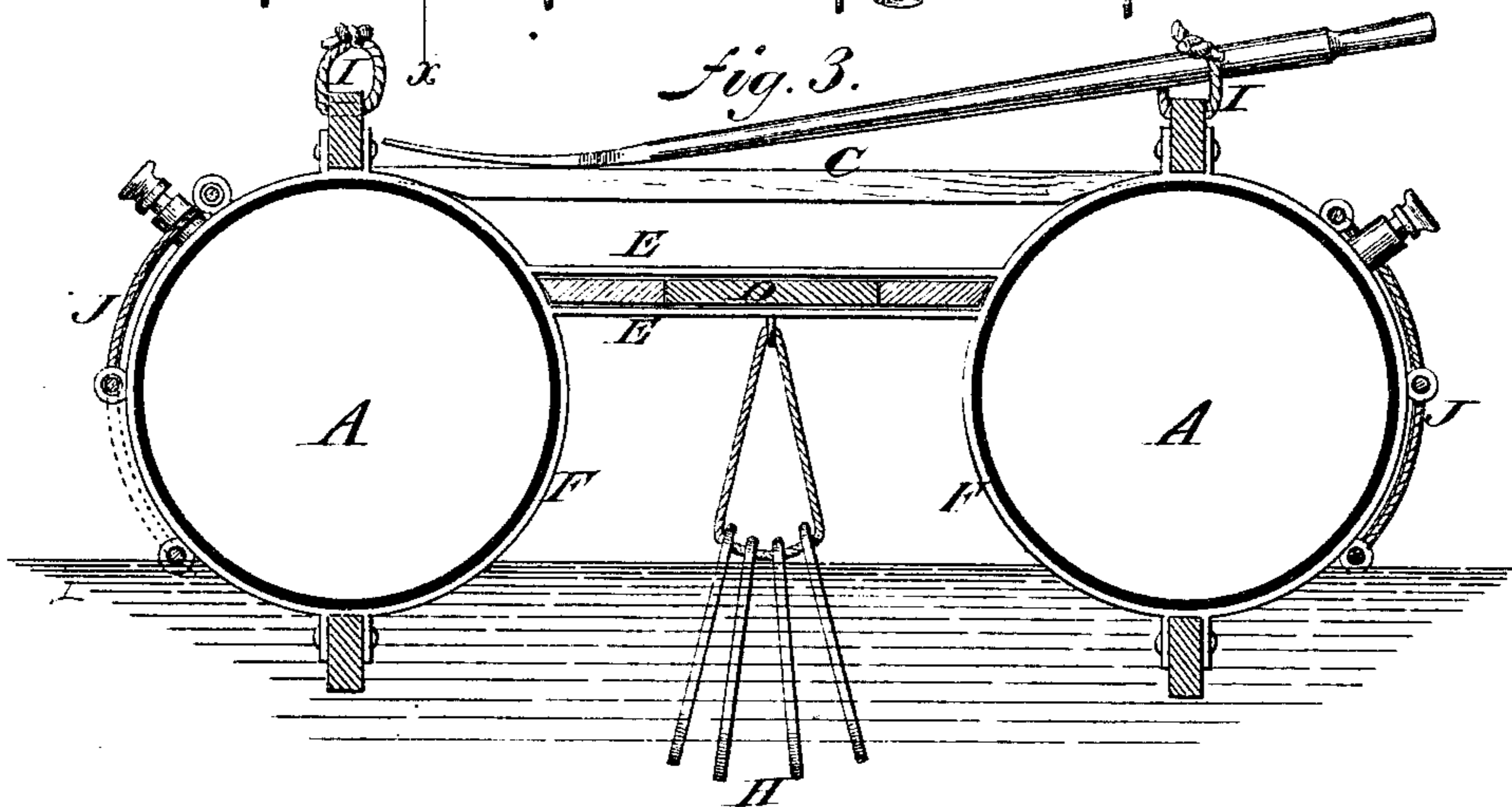
*fig. 1.*



*fig. 2.*



*fig. 3.*



WITNESSES:

*A. F. Terry*  
*A. F. Roberts*

INVENTOR:

BY *J. Rider*  
*Mumf*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JOHN RIDER, OF NEW YORK, N. Y.

## IMPROVEMENT IN LIFE-RAFTS.

Specification forming part of Letters Patent No. 183,777, dated October 31, 1876; application filed August 29, 1874.

*To all whom it may concern:*

Be it known that I, JOHN RIDER, of the city, county, and State of New York, have invented certain new and useful Improvements in Life-Rafts; and I do hereby declare the following to be a full, clear, and exact description of the same.

The object of this invention is to provide a life-raft that is mainly designed for surf-service, and that will ride and cut the waves in the nature of a life-boat, but with greater safety and buoyancy; and the invention consists of inflated air-cylinders, whose ends are curved upward and tapering toward central curved ribs.

In the accompanying drawing, Figure 1 represents a side view of my improved life-raft; Fig. 2, a top view; and Fig. 3, a vertical transverse section on line *c c*, Fig. 2.

Similar letters of reference indicate like parts.

A in the drawing represents the inflated air-cylinders, which are made of any flexible material impervious to water, and which are placed and supported in encircling bands F. Longitudinal top and bottom timbers stiffen the cylinders, while lateral braces E support a deck. Lateral top pieces C may also support a deck, if desired, so as to bring the passengers above the water, or they may be used as seats or supports. The raft is provided with

the usual appurtenances for propelling and steadying the same, as a drag, H, by which the raft will come right side up when thrown in the water. Bars are applied to safety-buckets I and life-ladders J.

The air-cylinders are collapsible, and may be inflated by suitable valve devices. The ends of the air-cylinders are made with tapering and curved-up ends, in the shape of a Venetian gondola. The wedge-shaped ends taper toward inner and outer central ribs of arc shape, that meet at a common point at suitable height above the deck. These ends are specially adapted to ride and cut the waves, as they rise above and are not submerged by the same.

Life-rafts with such gondola-shaped cylinders are therefore specially adapted for surf-service and heavy seas, forming a buoyant and superior life-saving raft.

What I claim is—

As an improvement in life-rafts, supporting air-cylinders having tapering and upward-curved ends, with central upper and lower curved ribs, that meet at a point above the top of the cylinders, substantially in the manner and for the purposes specified.

JOHN RIDER.

Witnesses:

T. B. MOSHER,  
ALEX. F. ROBERTS.