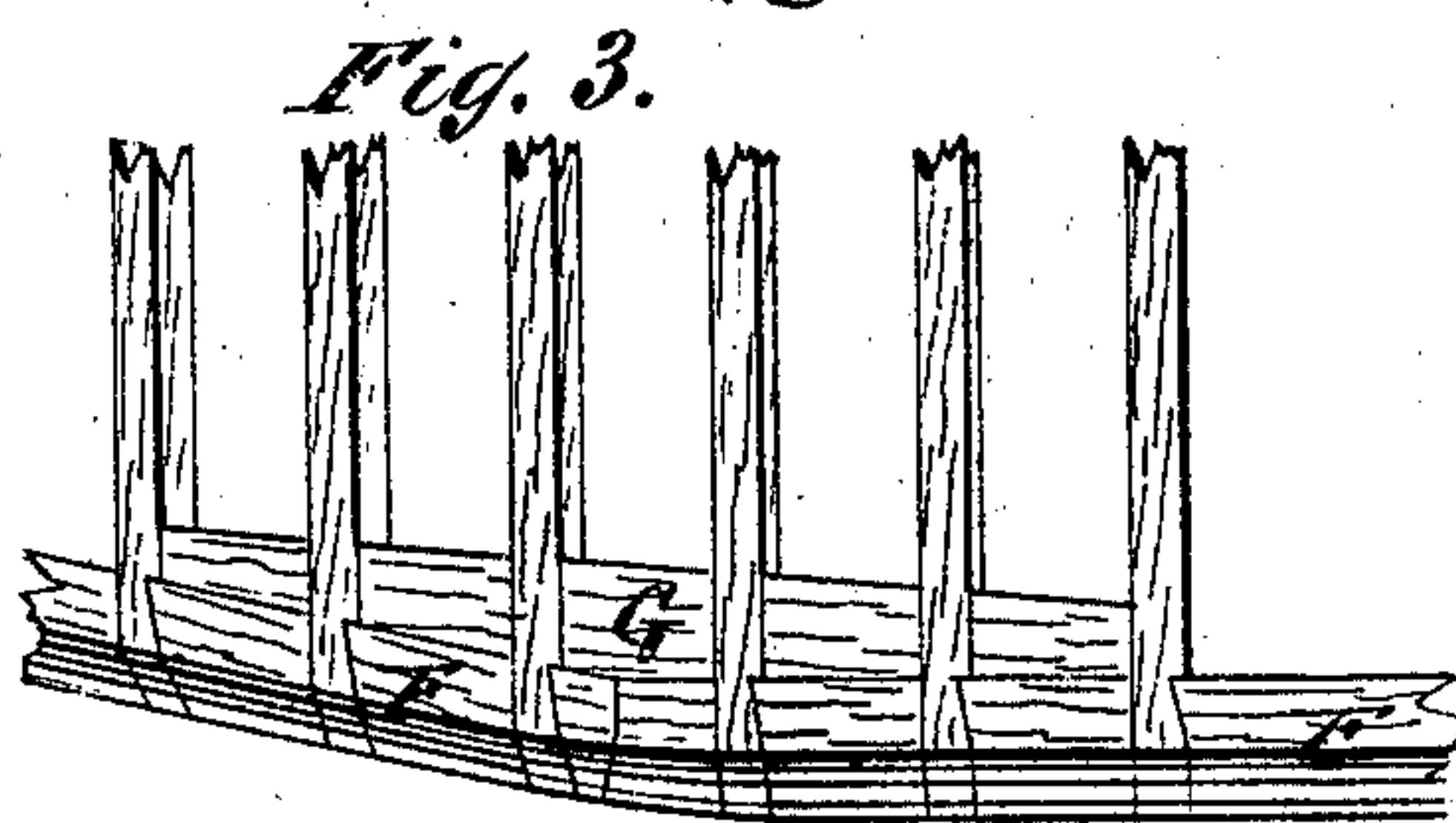
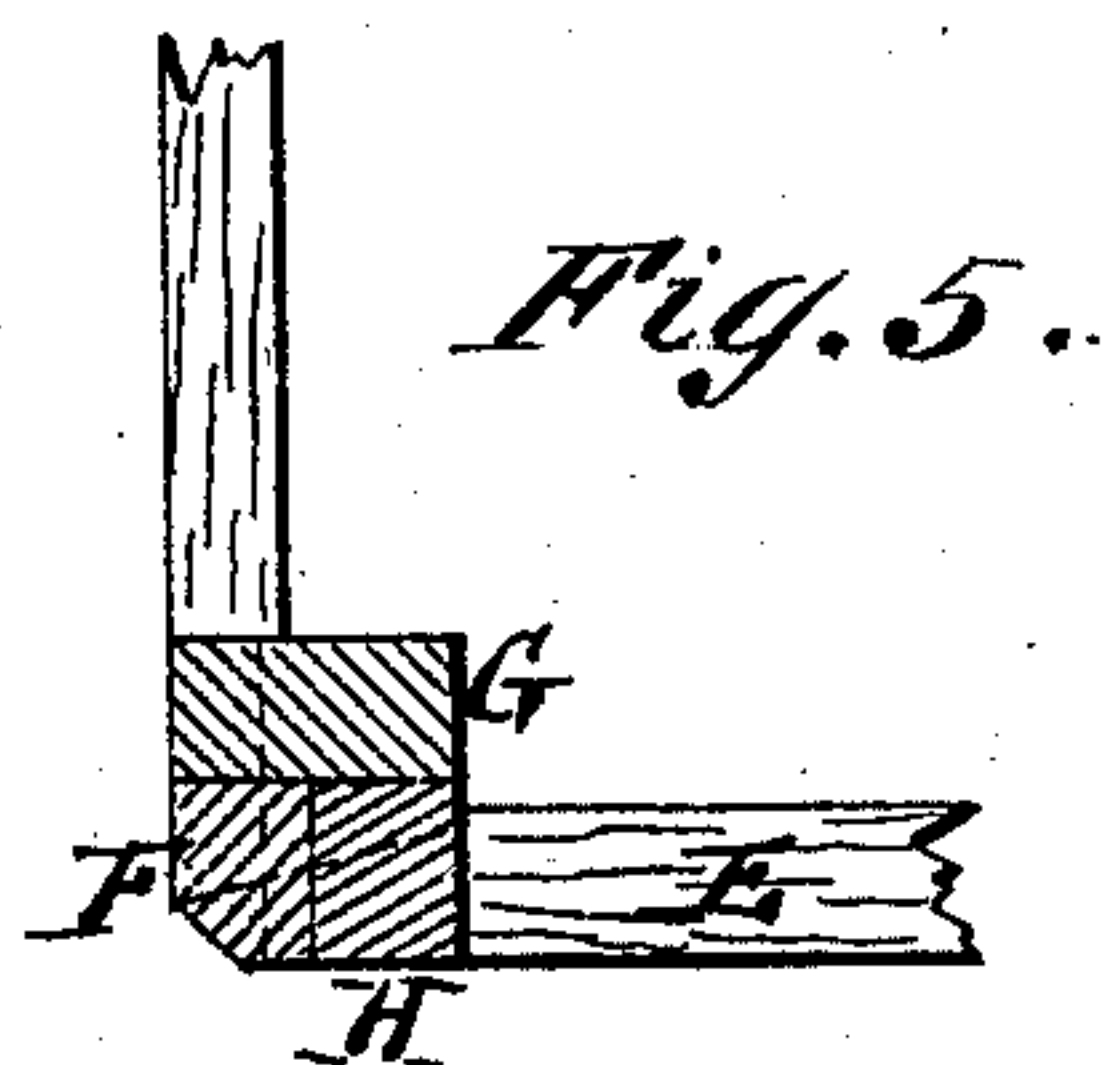
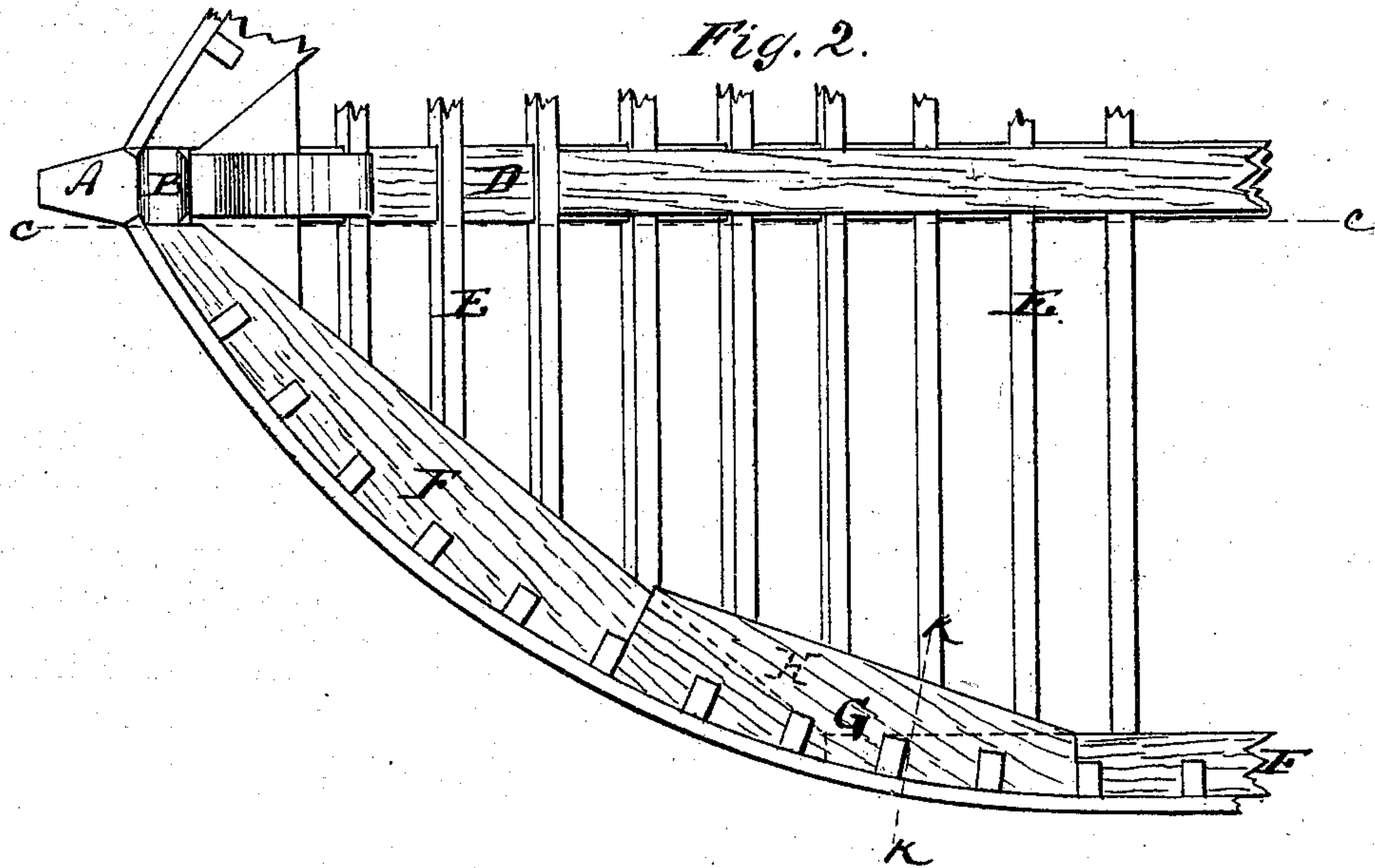
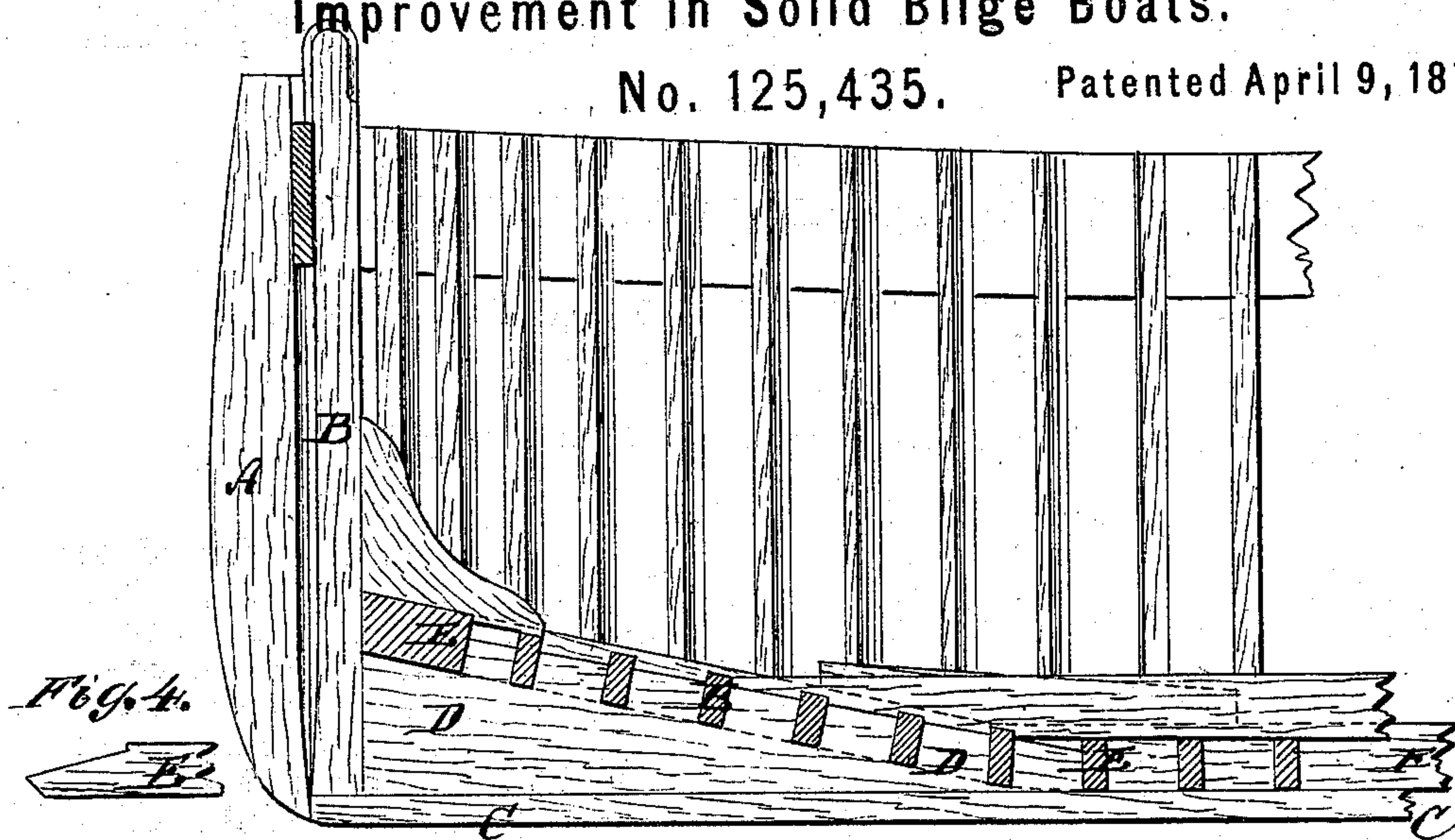


D. BRADER.

Improvement in Solid Bilge Boats.

No. 125,435.

Patented April 9, 1872.



Scale $\frac{3}{8}$ " = 1 ft.

Witnesses:

E. Woff.
Francis McArdle.

Inventor:

D. Brader

PBR

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UNITED STATES PATENT OFFICE.

DANIEL BRADER, OF BEACH HAVEN, PENNSYLVANIA.

IMPROVEMENT IN SOLID-BILGE BOATS.

Specification forming part of Letters Patent No. 125,435, dated April 9, 1872.

Specification describing certain Improvements in "Canal-Boats," invented by DANIEL BRADER, of Beach Haven, in the county of Luzerne and State of Pennsylvania.

Figure 1 represents a longitudinal section of the end of my improved canal-boat, the line *c c*, Fig. 2, indicating the plane of section. Fig. 2 is a top view of the same. Fig. 3 is a detail side view, showing the point or angle in bilge-logs and the lap-timber thereon. Fig. 4 is a detail side view of the tenoned end of bottom timber. Fig. 5 is a transverse section, on the line *K K*, Fig. 1, of the bilge-timber and top and inside lap-timbers.

Similar letters of reference indicate corresponding parts.

The invention relates to an improvement in the construction of solid-bilge boats to form a gradual slant and cause them to run more easily, as hereinafter fully described and subsequently pointed out in the claim.

A in the drawing is the stem; *B*, the apron or timber-head at the bow of the boat. *C* is the keel, extending straight forward to the timber-head. Upon the front portion of the keel is placed a triangular piece of wood, *D*, called the dead-wood, which abuts against the inner side of the timber-head, as shown. *E E* are the flooring-beams. They are, with their

inner ends, tenoned into the dead-wood, so that they gradually ascend from the flat bottom toward the bow, as is clearly indicated in Fig. 1. The outer ends of the flooring-timbers are secured, by tenons or otherwise, in the bilge-logs *F*, which form an angle at a point which is in line with the lower end of the dead-wood, and then ascend toward the timber-head parallel with the upper face of the dead-wood. In this wise the floor of the boat receives a slant or rake of one foot or more at the bow, which eases the boat, making it cut more readily through the water. At the stern there is the same arrangement, excepting the stem *A*, which is omitted. *G* represents a lap-timber placed upon the bilge-logs, where the same form the angle; and *H* is an inner lap-timber placed against the angle of the bilge-logs.

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

A solid-bilge boat, having the rise of bow and stern formed of straight timbers, as and for the purpose set forth.

DANIEL BRADER.

Witnesses:

JOHN H. HERT,
NATHAN RABERT.