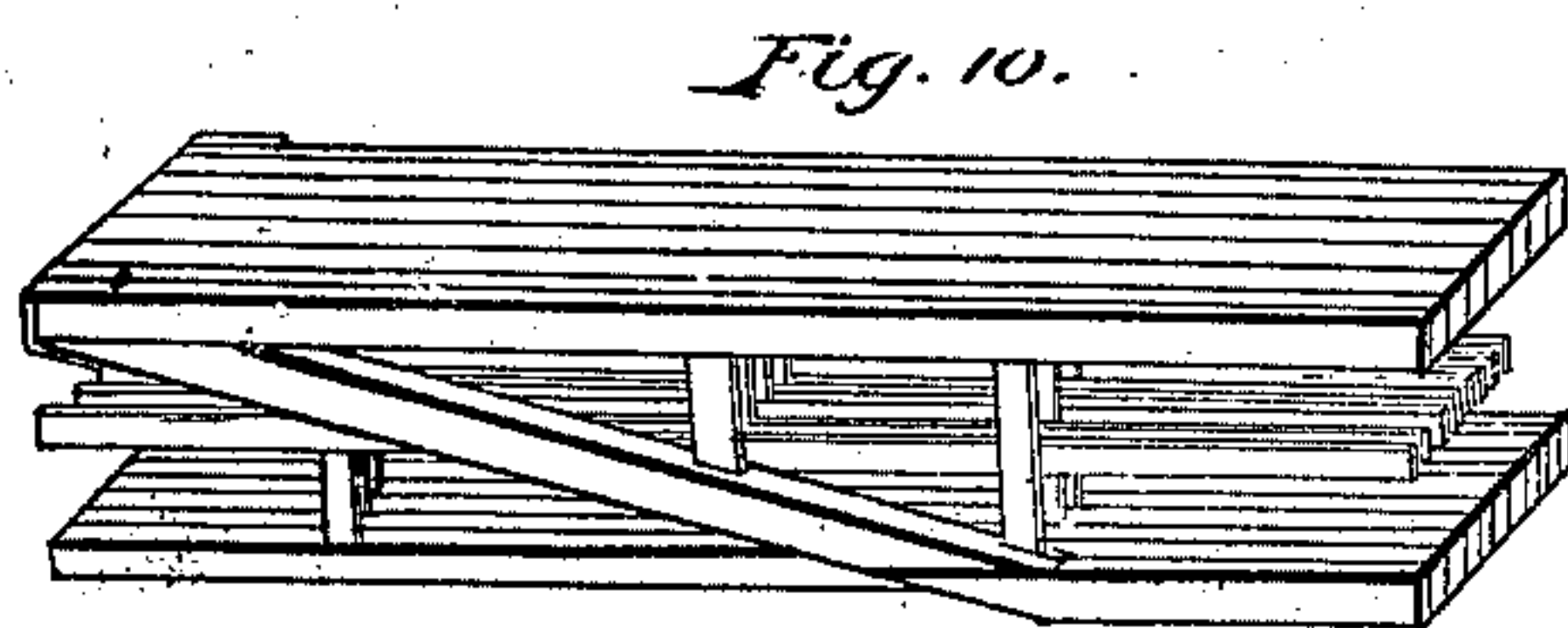
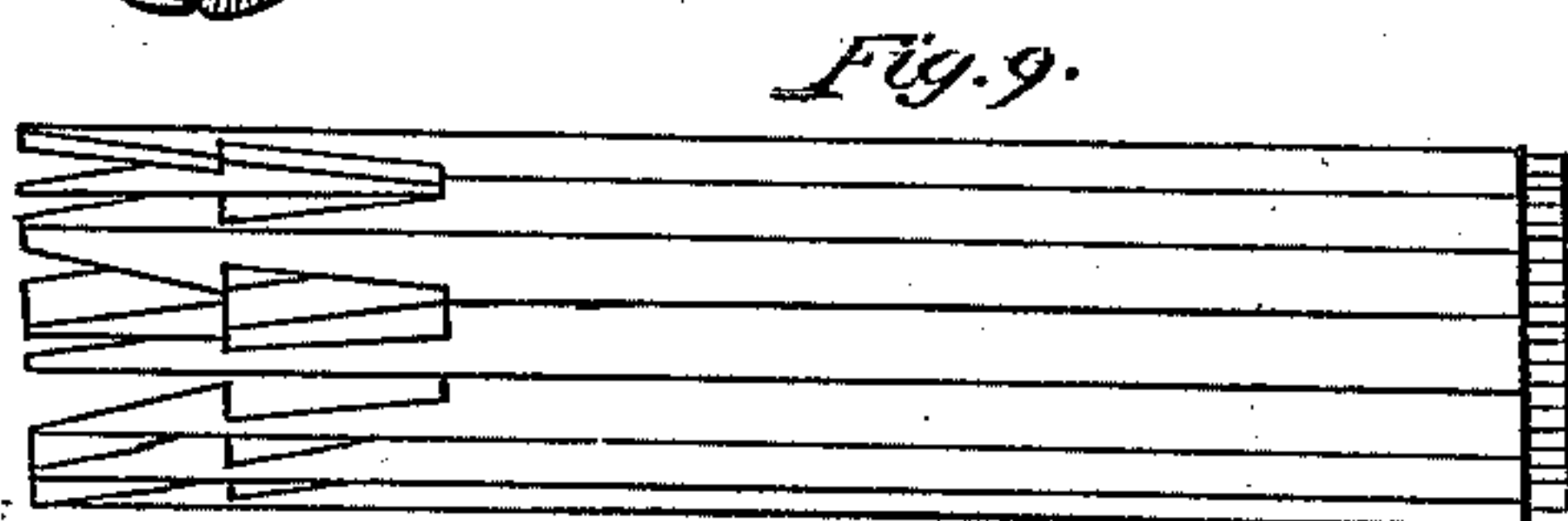
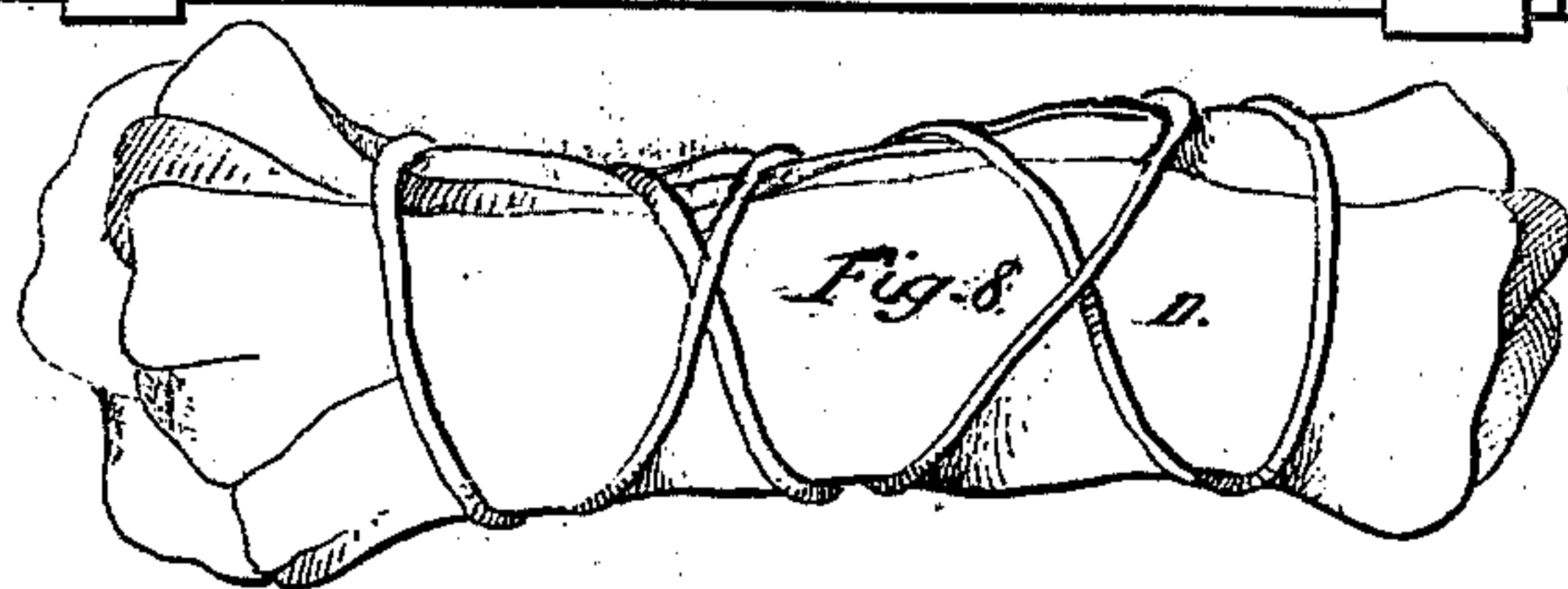
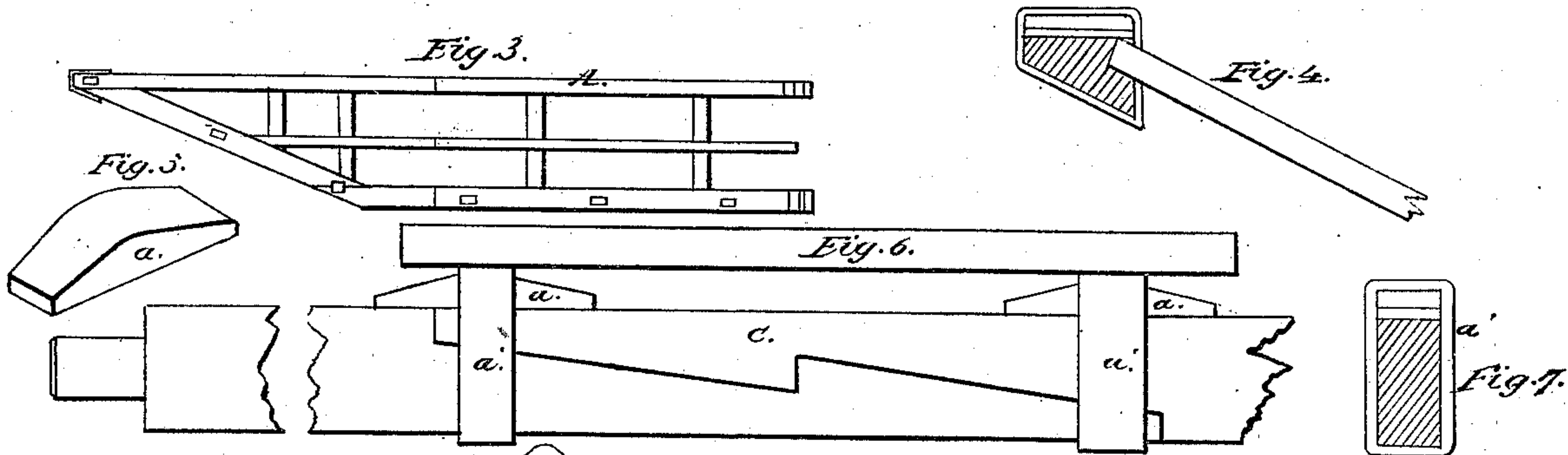
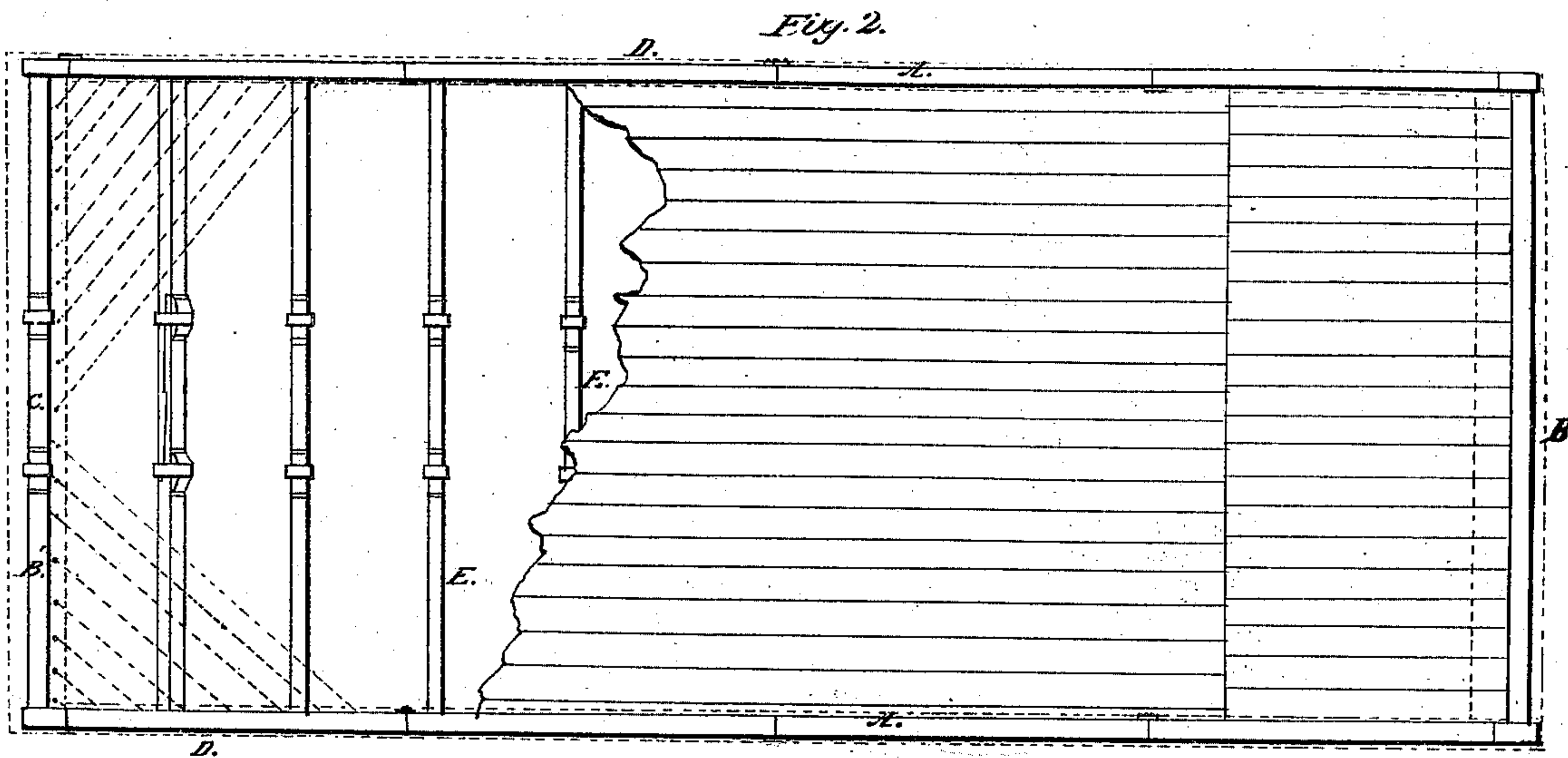
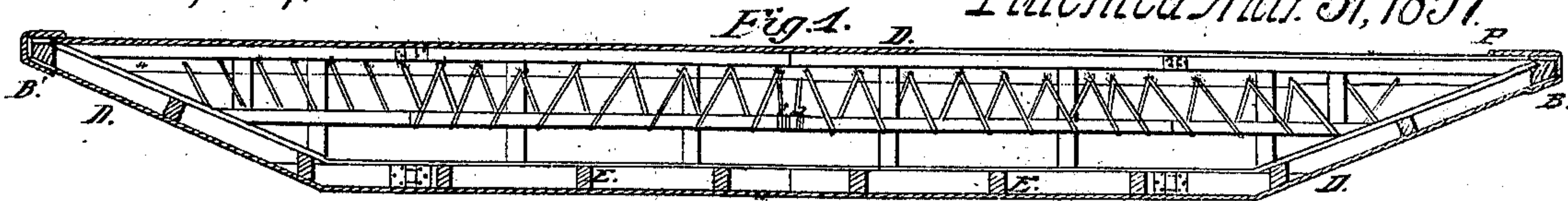


R. C. Buchanan, Life Boat & Raft.

N^o 16,904.

Patented Mar. 31, 1857.



UNITED STATES PATENT OFFICE.

ROBERT C. BUCHANAN, OF BALTIMORE, MARYLAND.

PORTABLE BOAT.

Specification of Letters Patent No. 16,904, dated March 31, 1857.

To all whom it may concern:

Be it known that I, ROBERT C. BUCHANAN, of Baltimore, in the State of Maryland, have invented a new and Portable Boat for Crossing Deep Streams, and that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other things before known and of the usual manner of making, modifying, and using the same, reference being had to the annexed drawings, of which—

Figure 1 represents a vertical cross section from stem to stem. Fig. 2 a top view of the same the canvas shown in red lines. Fig. 3 shows the side view of one half of the boat's side. Fig. 4 exhibits the manner of laying the flooring in the end rail. Fig. 5 the shape of the wedges used in securing the cross rails E together at their center. Fig. 6 shows the "graving" splice of the rails E, E, etc., and also a piece of flooring laid across the same. Fig. 7, a cross section of the same. Fig. 8 the canvas. Fig. 9 the cross rails and Fig. 10 the side rails all taken apart and made into separate packages for convenience in transportation.

The nature of my invention consists in a properly shaped wooden frame divided into sections which can be taken apart and folded together in a small compass; and, a stout canvas cover which being fitted over and lashed firmly to the frame answers in every respect the purpose of outside planking. These when properly put together form a strong capacious and portable boat by means of which the crossing of large bodies of troops over deep streams can be effected with facility.

The following is a description of the several parts of the boat and of the manner in which they are united the same letters and figures being made use of to designate the same parts in the drawings.

A, the side frame of the boat; 18 feet long on the top rail 13 feet 2 inches on the floor rail; and 18 inches high is divided into 4 equal parts united alternately on the outer

and inner sides by hinges on each rail. Midway between the upper and floor rails a small strong lash rail is fastened longitudinally to which the side edges of the canvas D are firmly lashed. The top and bottom rails are $2\frac{1}{2}$ and $3\frac{1}{2}$ inches thick.

B B' are the bow and stern rails, 8 feet long each in two parts united by a "graving" splice C secured on one side by wedges *a a* passing through hoop iron bands *a'* or by a hinge on the outer side strengthened by a flat iron brace on the inner side passing through similar bands. These rails are fitted by tenons on their ends into corresponding mortises in the ends of the top rails. On each half of the stern rail if necessary an eye may be fitted to receive a hook from its adjacent side rail, whereby any spread of the boat at that end may be prevented.

E, E, are the floor beams uniting the sides of the boat they are 8 feet long and 2—3 inches thick each is in two parts joined in the same manner as the bow and stern rails. The floor is of $\frac{1}{2}$ inch plank 4 ft. 6 long.

D, is the canvas cover shown in red lines in Figs. 1 and 2 and has eyelet holes worked in the edges of both sides and one end as shown in these figures the other end being shaped and fitted to receive the bow of the boat into a pocket P about 12 inches deep which prevents that end from spreading. The sides are lashed over the lash rail as in Fig. 1 (red lines) and the covering of the stern is effected by lashing it diagonally from its middle to each side as shown in Fig. 2.

What I claim is—

The portable boats as herein described the same consisting of the portable skeleton frame work and unprepared canvas, secured to the frame work by lashings in the manner set forth.

ROBT. C. BUCHANAN.

Witnesses:

R. T. CAMPBELL,
CHAS. G. PAGE.