

(No Model.)

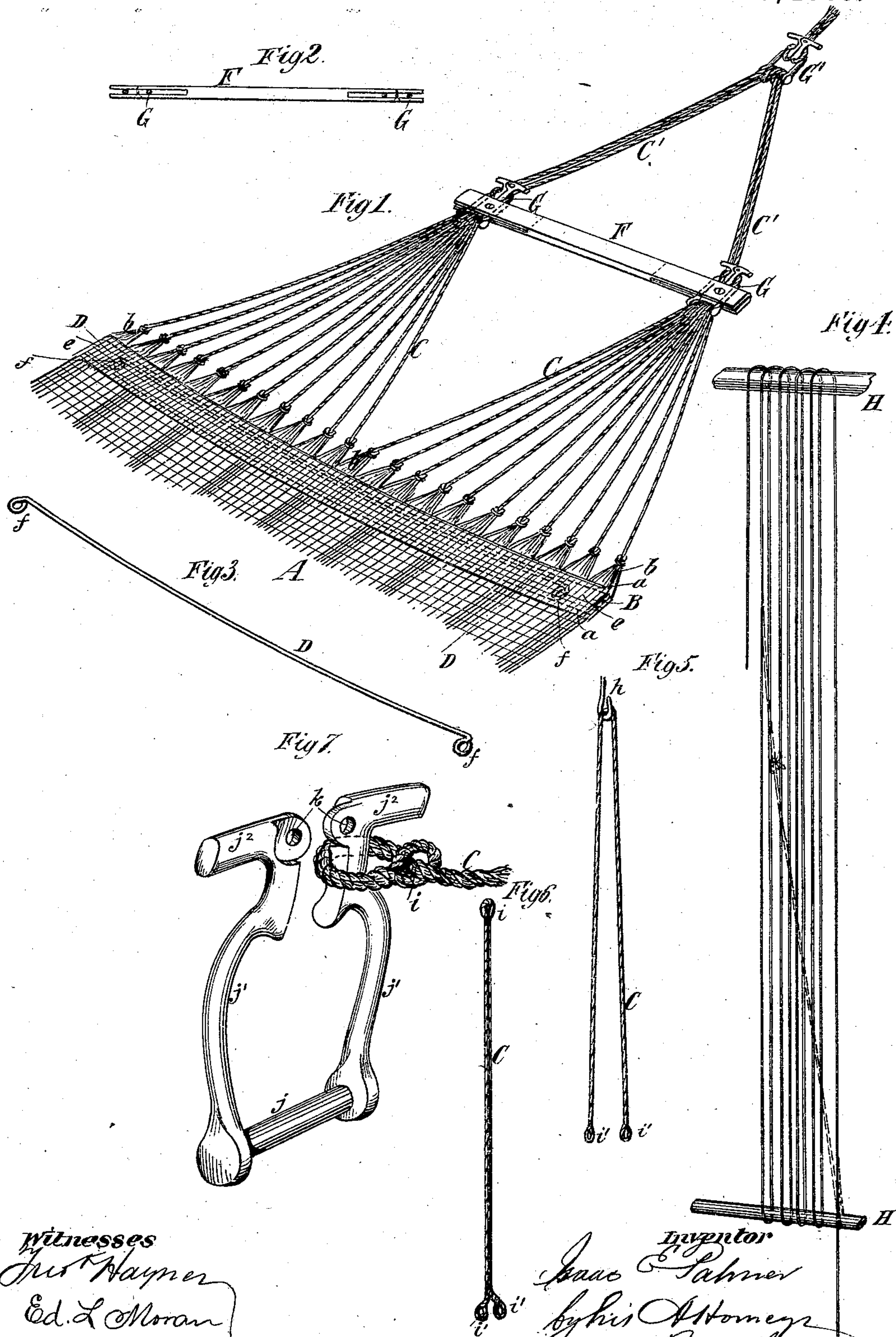
2 Sheets—Sheet 1.

I. E. PALMER.

HAMMOCK.

No. 272,311.

Patented Feb. 13, 1883.



Witnesses
Jus. W. W. W.
Ed. L. Moran

Inventor
Isaac Palmer
by his Attorneys
Brown & Brown

(No Model.)

2 Sheets—Sheet 2.

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Fig 8.

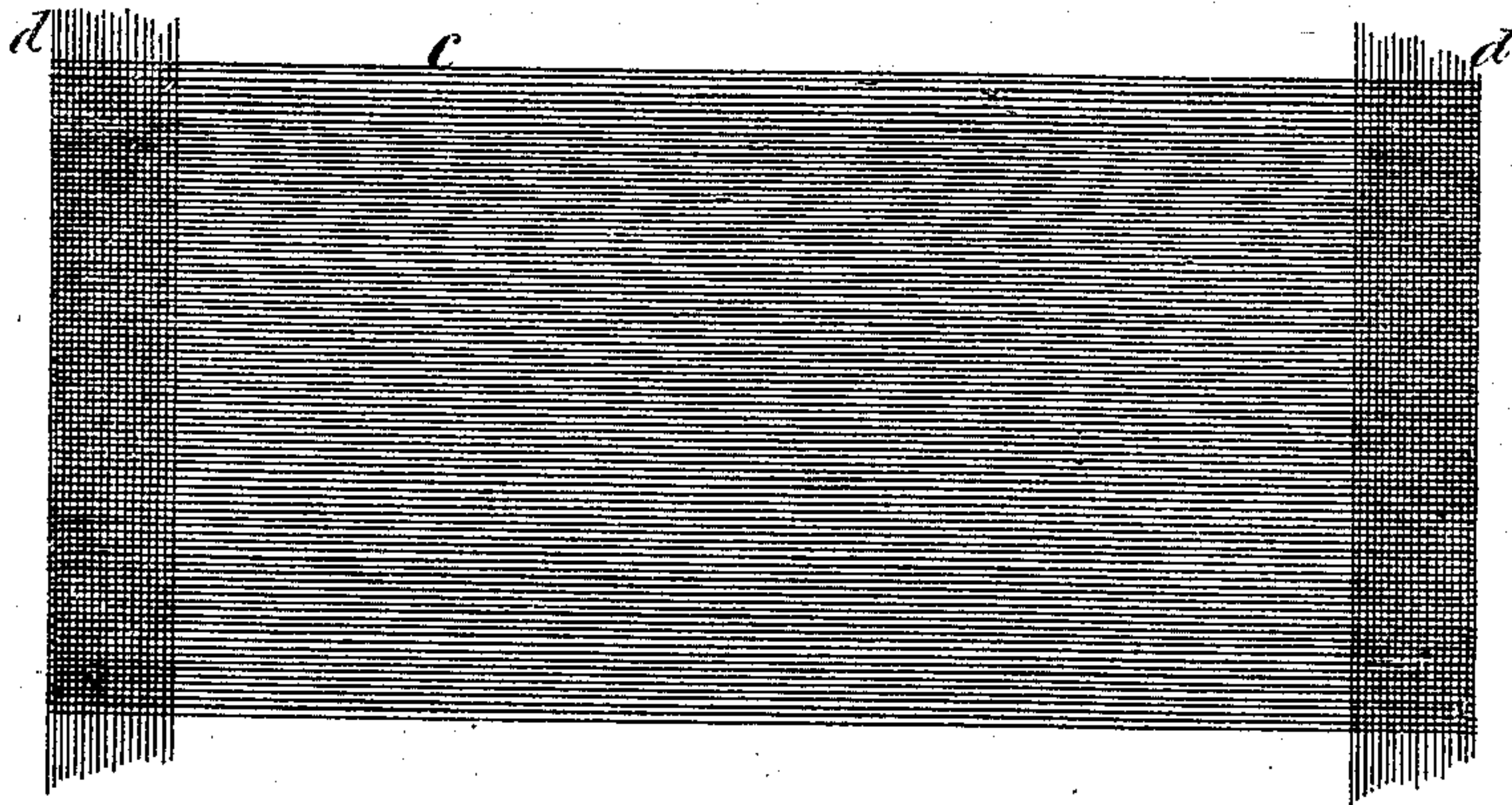


Fig 10.

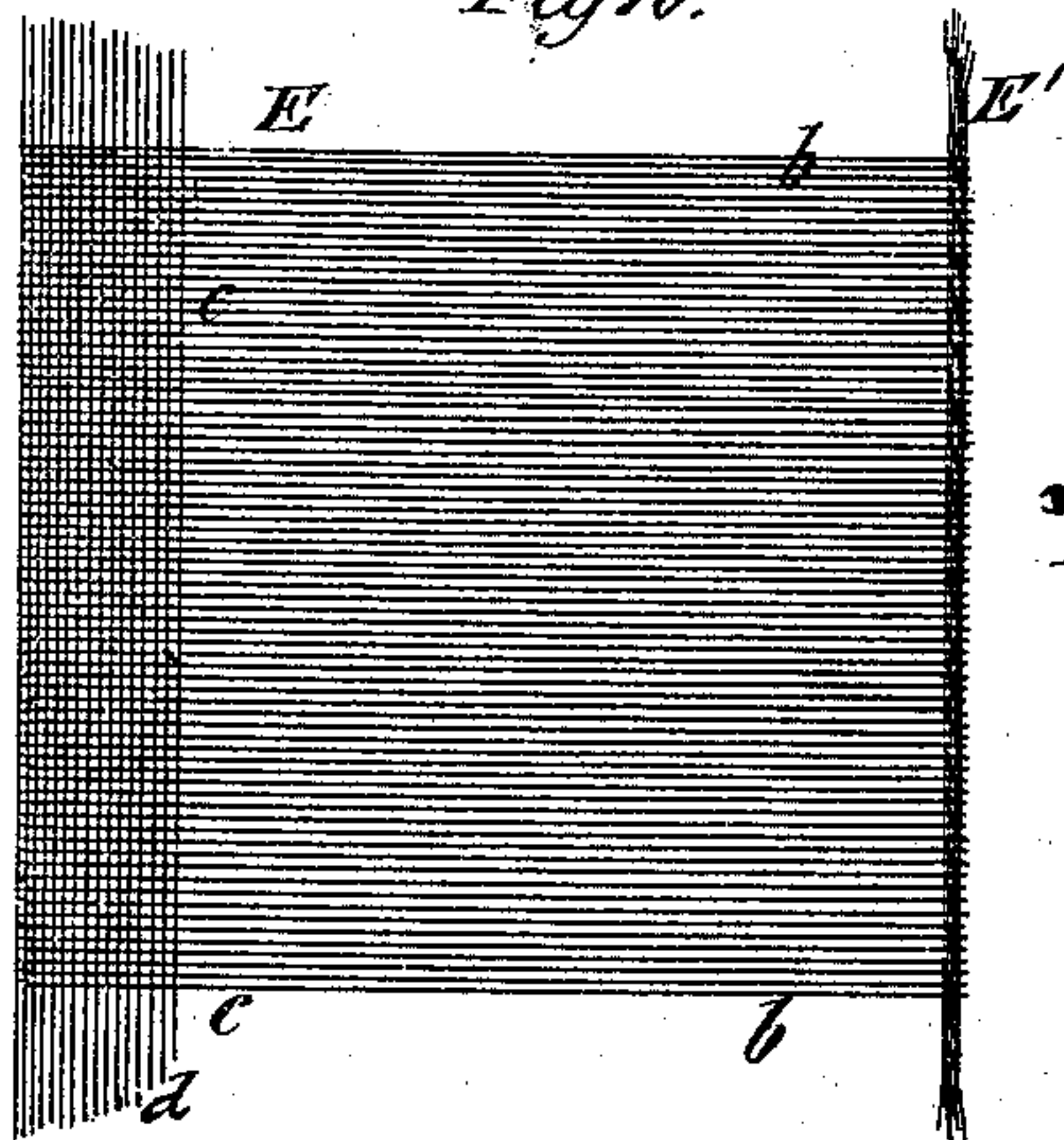


Fig 9.

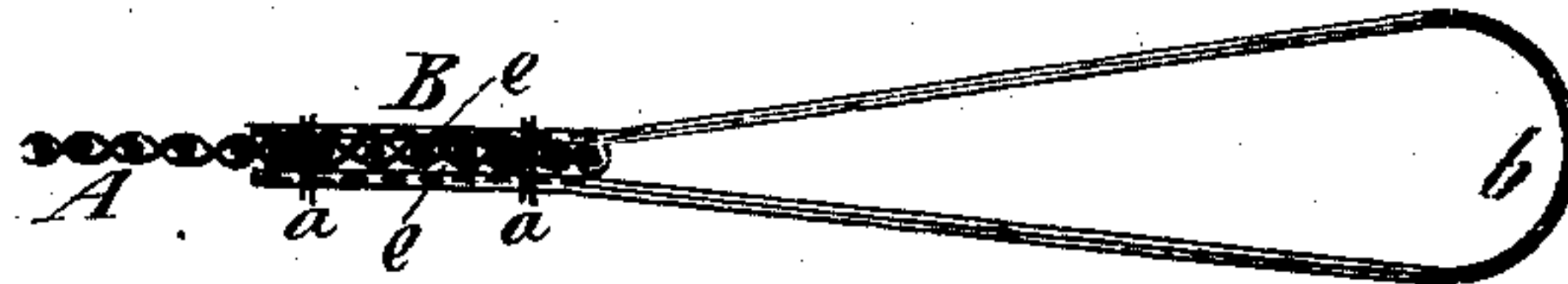
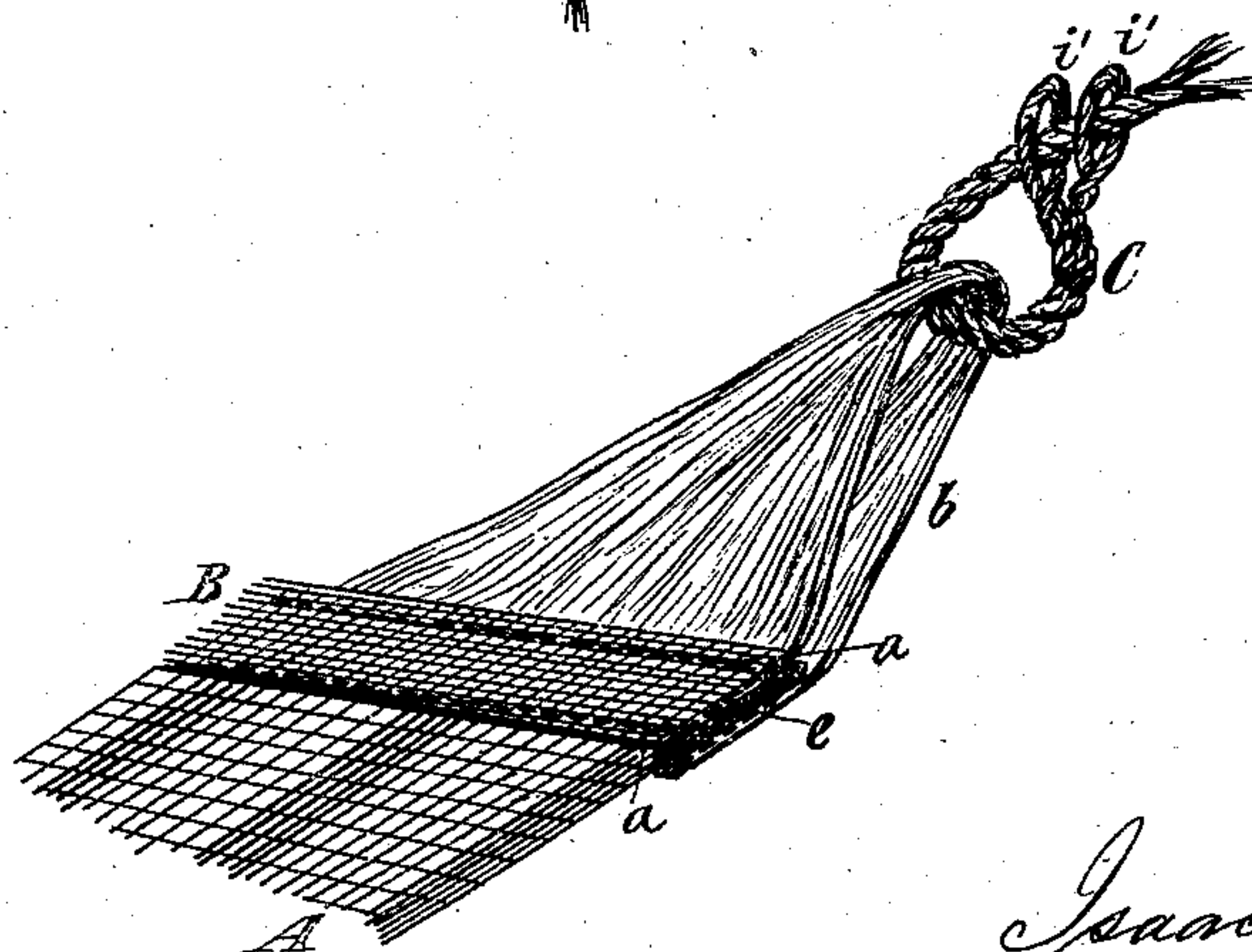


Fig 11.



Witnesses
Jas. H. Hays
Ed. L. Moran

Inventor
Isaac E. Palmer
by his Attorneys
R. M. Brown

UNITED STATES PATENT OFFICE.

ISAAC E. PALMER, OF MIDDLETOWN, CONNECTICUT.

HAMMOCK.

SPECIFICATION forming part of Letters Patent No. 272,311, dated February 13, 1883.

Application filed January 2, 1883. (No model.)

To all whom it may concern:

Be it known that I, ISAAC E. PALMER, of Middletown, in the county of Middlesex and State of Connecticut, have invented a new and useful Improvement in Hammocks, of which the following is a specification.

My invention consists in a novel combination, with a hammock, of a binder or facing-piece attached to the end thereof, and having suspension-loops formed on it, as hereinafter described.

The invention also consists in the combination, with a hammock provided at its end with loops and a divided suspension stirrup or device, of suspension-cords provided at the ends with integral loops, and connected at one end with the loops of the hammock and at the other end with the suspension stirrup or device.

The invention also consists in a suspension-cord of novel form for a hammock.

The invention also consists in the combination, with a hammock, a stretcher or bar arranged beyond the end thereof, and a suspension stirrup or device, of suspension-cords converging from the hammock toward the stretcher and attached to the stretcher at two or more points, and suspension-cords converging from the stretcher toward the suspension device and connected with said device.

The invention also consists in the combination, with suspension-cords for a hammock provided with integral loops, of a divided stirrup or suspension device of novel form, to which said integral loops are secured.

The invention also consists in the combination, with a hammock, of a binder or facing-piece attached to the end thereof by parallel rows of stitching, forming a pocket between them, and a spreader arranged in said pocket.

The invention also consists in a spreader of novel construction for a hammock.

In the accompanying drawings, Figure 1 represents a perspective view of the end portion of a hammock embodying my invention. Fig. 2 represents a side view of the stretcher employed. Fig. 3 represents a perspective view of the spreader employed. Figs. 4 and 5 are views illustrating the manner of forming the suspension-cords. Fig. 6 represents one of the suspension-cords completed. Fig. 7 rep-

resents a perspective view of one of the divided suspension stirrups or devices and a suspension-cord in the act of being placed thereon. Fig. 8 represents a binder, which I may attach to the end of the hammock. Fig. 9 represents a sectional view of the end portion of the hammock and an attached binder. Fig. 10 represents a facing-piece, which may be employed in lieu of the binder; and Fig. 11 represents a perspective view, showing the manner in which the suspension-cords are attached to the loops of the binder or facing-piece.

Similar letters of reference designate corresponding parts in all the figures.

A designates the end portion of a hammock, the body of which may be made of any suitable woven or other fabric or material, and B designates a binder, which extends across the end of the hammock and may be secured thereto by parallel rows of stitching *a*. On the binder B are formed loops *b*, to which suspension-cords C are attached.

In Figs. 8 and 9 I have shown the method of forming and attaching the binder. The binder is composed of a fabric of which *c* designates the weft-threads and *d* the warp-threads. The warp-threads are only employed at the edges or selvages of the fabric, and when the fabric is folded, as shown in Fig. 9, so as to bring the selvages on opposite sides of the hammock A, the portions of the weft-threads *c* between the groups of warps *d* form the loops *b*, to which the suspension-cords C are attached.

When the binder B is attached to the hammock A by parallel rows of stitching *a*, a pocket *e*, is formed between said rows of stitching on each side of the hammock, and in this pocket I may place a spreader, D. (Shown in dotted lines in Fig. 1 and detached in Fig. 3.) The spreader may be made of wire, as shown in Fig. 3, and it does not extend quite to the ends of the pocket *e*, but is of a length a little less than the width of the hammock. When the said spreader is made of wire I form heads *f* at the ends, which prevent the ends from sticking through the pocket. The heads may be formed by eyes at the ends of the spreader, as shown, or by bending over the ends in any shape.

In lieu of employing a binder, I may use a facing-piece, E, of the form shown in Fig. 10. This facing-piece is formed of a fabric which has warp-threads *d* at one edge only, and the weft-threads *c* are carried over a catch cord or wire, E', so as to form loops *b*. This facing-piece is sewed on the end of the hammock by parallel rows of stitching, and between said rows a single pocket is formed, into which a spreader may be inserted.

F designates a stretcher arranged transversely to the hammock and at a little distance from the end thereof. This stretcher has a stirrup or suspension device, G, secured in each end thereof, and it may have more than two of said suspension devices, if necessary. The ends of the stretcher may be split or divided, so as to form jaws, between which the devices are inserted, and secured by rivets or screws inserted through said jaws, as best shown in Fig. 2.

The loops *b* on the binder B or facing-piece are gathered into groups, and are connected with the suspension devices G by groups of suspension-cords C. Two groups of suspension-cords C only are here shown, those on one side of the center of the hammock converging toward one device, and those on the other side of said center converging toward the other device; but three or more suspension devices or stirrups, G, might be attached to the stretcher F, and the suspension-cords C arranged in a corresponding number of groups. At a distance from the stretcher F, I arrange a third stirrup or suspension device, G', from which two or more suspension-cords, C', extend to the two or more stirrups or devices on the stretcher F, and by this arrangement I obtain what I term a "triangular suspension," which is desirable for all hammocks, but especially so for double hammocks intended for two persons.

The suspension-cords I form in a novel manner, as best shown in Figs. 4, 5, and 6. I take cord or yarn and wind it over two bars, H, as shown in Fig. 4, after which I gather it together and double it over a hook, *h*, and there twist it from the middle toward the ends, as shown in Fig. 5. The two twisted portions or strands are then twisted or laid together, as shown in Fig. 6, and their twist will be preserved. The cord C or C' thus formed has at one end an integral loop, *i*, and at the other end two integral loops, *i'*.

The form of suspension device which I prefer to employ is shown best in Fig. 7. It may be made of wrought or malleable iron, and, as shown, consists essentially of a bar, *j*, arms *j'*, extending from opposite ends thereof and then converging to a point, where they are united by a rivet or other device inserted through holes *k*. The ends of the arms *j'* are bent or made to project outward in opposite directions, so as to form horns *i''*, which together form a cleat.

In attaching the suspension-cords C, I first gather the loops *b* on the binder B or facing-piece into groups or bunches, each containing

any desired number of loops, and I then connect the integral loops *i'* of a suspension-cord, C, with each group or bunch, as shown in Fig. 11.

When made the stirrups or suspension devices G have their arms *j'* slightly separated, and I connect the cords C with them by passing the cord through its integral loop *i*, as shown in Fig. 7. After all the cords C are on the devices or stirrups G, I close the arms *j'* toward each other, and may secure them together by a rivet or screw inserted through the holes *k* in them; or I may leave them unconnected. The two or more outer suspension-cords, C', have their loops *i'* connected with the cleats *j''* of the two or more stirrups or suspension devices, G, and at their other or outer ends are connected by their loops *i* with the other suspension devices, G', in the manner shown in Fig. 7, and just described. The suspension device G' may then be connected by a rope or otherwise with any hook or ring from which the hammock is suspended.

Obviously the system of triangular suspension herein described might be employed for a hammock having loops formed in weaving the hammock, instead of on a binder or facing-piece afterward attached to the hammock.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a hammock, of a binder or facing-piece attached to the end thereof, and having suspension-loops formed on or in it, substantially as and for the purpose described.

2. The combination, with a hammock provided at its end with loops and a divided suspension stirrup or device, of looped suspension-cords connected at one end with the loops of the hammock and at the other end with the said suspension stirrup or device, substantially as and for the purpose described.

3. The suspension-cord C for a hammock, provided with the integral loop *i* at one end and the integral loops *i'* at the other end, substantially as described.

4. The combination, with a hammock, a stretcher or bar arranged beyond the end thereof, and a suspension stirrup or device, of suspension-cords converging from the hammock toward the stretcher and attached to the stretcher at two or more points, and suspension-cords converging from the stretcher toward the stirrup or suspension device and attached to said device, substantially as described.

5. The combination, with a suspension-cord for a hammock provided with an integral loop, of a divided stirrup or suspension device, the two sides of which may be separated to enable the cords to be attached to or removed from said stirrup or device, substantially as described.

6. The combination, with the hammock suspension-cords C, of the stirrups or suspension device G, composed of the bar *j*, the arms

j' , and the horns or projections j^2 , forming a cleat, substantially as and for the purpose described.

5 7. The combination, with a hammock, of a binder or facing-piece attached to the end thereof by rows of stitching, forming a pocket between them, and a spreader arranged in said pocket, substantially as and for the purpose described.

8. The spreader D, provided with heads f , 10 substantially as and for the purpose described.

ISAAC E. PALMER.

Witnesses:

FREDK. HAYNES,
ED. L. MORAN.