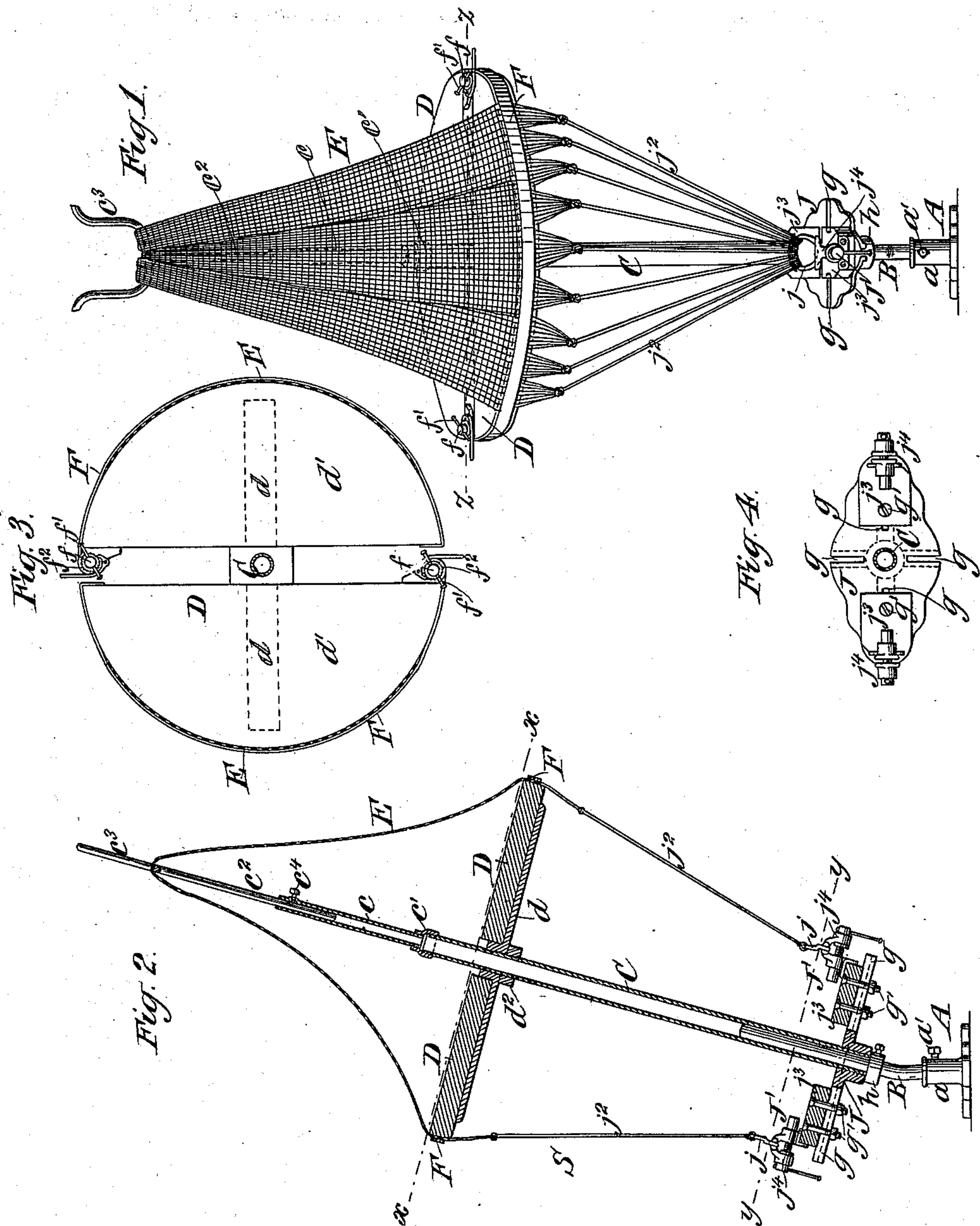


(No Model.)

I. E. PALMER.
APPARATUS FOR STRINGING HAMMOCKS.

No. 402,275.

Patented Apr. 30, 1889.



Witnesses:

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UNITED STATES PATENT OFFICE.

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APPARATUS FOR STRINGING HAMMOCKS.

SPECIFICATION forming part of Letters Patent No. 402,275, dated April 30, 1889.

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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 Apparatus for Stringing Hammocks, of which the following is a specification, reference being had to the accompanying drawings.

My improvement relates to apparatus employed for attaching the suspending cords or ropes to the ends of a hammock, and also to the suspension devices by which the hammock may be suspended.

I will describe an apparatus embodying my improvement in detail, and then point out the novel features in claims.

In the accompanying drawings, Figure 1 is a side elevation of an apparatus for stringing hammocks, embodying my improvement. Fig. 2 is a vertical section taken on the line $z z$, Fig. 1. Fig. 3 is a horizontal section taken on the plane of the line $x x$, Fig. 2. Fig. 4 is a detail of certain lower parts of the apparatus, the section being taken at $y y$, Fig. 2.

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

A designates the base-piece of the apparatus. This base-piece is provided about centrally with a socket, a . B designates a standard, which standard extends near its lower end into the socket a , and is adjustably secured therein by means of a set-screw, a' . I have shown this standard as bent or deflected at an angle above the socket a . The object of this will be presently described.

C designates a support for certain parts of the apparatus. In the example of my improvement shown this support is tubular, and is of such internal diameter near its lower end that it will freely receive the standard B, and may be turned about the latter. Secured to the support C at some distance above the standard B is a frame, D, here shown as of circular or rounded outline, and comprising a plate, d , which may advantageously be of metal, and two semicircular plates or tables, d' . The plate d is provided centrally in this instance with a hub, d^2 , which hub may be secured to the support C by screw-threads or in any other suitable manner. The plates or tables d' are to be secured to the plate d .

I have shown the upper portion of the support C, or that portion which is above the frame D, of somewhat reduced diameter, although this is not wholly essential. This feature is accomplished in the present case by employing a tube, c , of less diameter than the main portion C of the support, which two portions may be secured together by a coupling-piece, c' . Extending into the upper portion of the tube c is the shank c^2 of a device for supporting a hammock, E. This supporting device comprises in this instance a forked portion, c^3 , which is secured to or formed integral with the shank c^2 . The supporting device is longitudinally adjustable within the tube c , and may be secured in any desired position by set-screw c^4 .

The hammock to be operated upon is hung within the forked portion c^3 of the supporting device and about midway in the length of the hammock. The end portions of the hammock are then brought downwardly to the edges of the portions d' of the frame D, the supporting device $c^2 c^3$ having been so adjusted that the woven portion of the ends of the hammock will overlap the edges of the frame.

I desire to secure the ends of the hammock in such position, and for this purpose I have shown clamping devices comprising leather bands F. It will be seen that these bands are each secured near one of their ends to one of the portions d' of the frame D. They may be thus secured, as shown, by bending the ends of the bands so as to overlap the corners of the portions d' of the frame. The bent-around portions may then be secured to the portions d' by screws or otherwise. The bands F, near their other ends, are combined with drums f , constituting tighteners for the bands, to which they may be secured by passing them through suitably-formed slots in the drums, or in any other convenient manner, so as to be wound up on the drums when the latter are rotated. The drums f may be rotated to tighten the bands about the frame or to loosen said bands. I have shown bars f' extending through the portions of the drums f , by grasping which the drums may be rotated. Combined with the drums also are ratchets and pawls f^2 , by which the drums may be secured when the

bands have been sufficiently tightened. In the example of my improvement shown these tighteners are arranged diametrically opposite each other in a space between the portions d' of the frame D. It will be seen that the bands extend in reverse directions to each other about the frame. The end portions of the hammock having been passed between the bands and the edges of the frame, the bands are tightened in the manner described, so as to prevent the withdrawal of the ends of the hammock.

Mounted upon the support C, near the lower end thereof, is a frame, J, which frame constitutes a support for retaining devices J' . These retaining devices are employed to retain the suspension devices j , with which one of the ends of the suspending-cords j^2 for the hammock are to be secured. They are in effect mounted upon the support C.

In the example of my improvement shown the retaining devices J' comprise plates or blocks j^3 , upon which are mounted vises j^4 . These vises may be of ordinary construction, and may be adjusted in the ordinary way to grasp and retain the suspension devices j . The retaining devices are adjustable toward and from the center of the machine. To accomplish this adjustment I have provided the frame J with radial slots g , through which slots extend bolts g' , by which the retaining devices may be secured in any position to which they may be adjusted.

The suspension cords or ropes may be secured to the end portions of the hammock in any convenient way, but I have shown them as knotted to groups of the warp-threads. They may likewise be secured in any desirable manner to the suspension devices j . It is sometimes desirable to shorten those of the suspension cords or ropes which are nearest the middle of the hammock, and to lengthen somewhat those which are nearest the sides thereof, or vice versa. It is for this purpose that I make the retaining devices adjustable toward and from the center of the apparatus, for as the frame D, in which the ends of the hammock are secured, is of circular form, it is obvious that by moving the retaining devices nearer the center of the apparatus those suspension-cords nearer the middle of the hammock will be longer relatively to those which are nearest the sides of the hammock than they will be when the retaining devices occupy positions farther from the center of the apparatus. This ability to lengthen and shorten the suspension-cords relatively to each other is advantageous, because it enables me to cause the suspension-cords to lie flatter when the hammock is suspended for use.

It is obvious that as all the suspending-cords upon each end of the hammock are brought to a common suspension device the cords upon or near the outer edge of the hammock will be longer naturally, than those near the center of the hammock, in order that

an even pull may be exerted upon each of the suspension-cords. This arrangement, however, causes a considerable sagging of the hammock at about midway in its width. If the suspension-cords near the center or midway in the width of the hammock be shortened, this tendency to sag will in a measure be overcome, because greater strain will come upon such cords than those at or near the side edges of the hammock.

By bending or deflecting the standard B at an angle it will be seen that the portion of the hammock being operated upon—as, for instance, the portion S, (shown more clearly in Fig. 2)—will assume a substantially vertical position, and is therefore of more ready access to the operator. The support C being rotary upon the standard B and the frame J being rigidly secured to the support C, when the latter is rotated it of course will carry with it the retaining devices J' , so as to bring the different parts of the hammock into the vertical position just referred to as the same may be desired.

I have shown a collar, h , surrounding the standard B and secured by a set-screw, by which means the support C and its co-acting parts are maintained in the desired vertical position, of course it being understood that by moving the collar upwardly or downwardly the vertical position of the support C and its co-acting parts may be changed.

I have shown the frame J as of greater extension in one direction than in the other.

The radial slots g in the portion of lesser extension may be used, if desired, for receiving the bolts for the retaining devices J' . I have shown these slots g as extending nearer the center of the apparatus than those in the portion of the frame of greater extension. I may use the slots g in the portion of lesser extension when I desire to bring the retaining devices very close to the center of the apparatus.

In some cases the supporting device $c^2 c^3$ may be omitted, if desired.

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

1. In an apparatus for stringing hammocks, the combination, with a standard, of a rotary support mounted thereon, a frame mounted on said support, clamping devices for the body of the hammock adapted to clamp the same to said frame, and retaining devices also mounted on said support below the said frame, substantially as specified.

2. In an apparatus for stringing hammocks, the combination, with a standard, of a rotary support thereon, a frame mounted on said support, a supporting device for the body of the hammock extending above said frame, clamping devices for the hammock connected with said frame, and a retaining device also mounted on said support below said frame, substantially as specified.

3. In an apparatus for stringing hammocks, the combination, with a standard which is

bent or deflected at an angle, of a rotary support thereon, a frame mounted on said support, a supporting device for the body of the hammock extending above said frame, clamping devices for the hammock mounted on said frame, and retaining devices mounted on said support below said frame, substantially as specified.

4. In an apparatus for stringing hammocks, the combination, with a standard, of a rotary support mounted upon the same and adjustable lengthwise thereon, a frame upon said support, a supporting device for the body of the hammock mounted upon said support, and retaining devices also mounted upon said support below said frame, substantially as specified.

5. In an apparatus for stringing hammocks, the combination, with a standard, of a rotary support mounted thereon, a frame of circular or rounded form mounted upon said support, a supporting device for the body of the hammock extending above said frame, clamping devices for the hammock mounted on said frame, and retaining devices mounted on said support below said frame, substantially as specified.

6. In an apparatus for stringing hammocks, the combination, with a standard, of a support mounted thereon, a frame of circular form mounted on said support, a securing device for the hammock, consisting of bands extending about the edges of said frame and

adapted to bind the end portions of the hammock between the edges of the frame and the bands, substantially as specified. 35

7. In an apparatus for stringing hammocks, the combination, with a standard, of a support mounted thereon, a frame secured to the said support, a supporting device for the body of the hammock, and clamping devices for the end portions of the hammock, which clamping devices are secured near one of their ends to said frame and at their other ends to tighteners, whereby they may be tightened about the hammock, substantially as specified. 45

8. In an apparatus for stringing hammocks, the combination, with a standard, of a support mounted thereon, a frame mounted on said support, and clamping devices for the end portions of the body of the hammock secured near one of their ends to said frame and extending in reverse directions about the same, and tighteners for causing the clamping devices to grip and secure the hammock, substantially as specified. 55

9. In an apparatus for stringing hammocks, the combination, with a standard, of a support mounted thereon and radially-adjustable retaining devices mounted upon said support, substantially as and for the purpose specified. 60

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Witnesses:

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