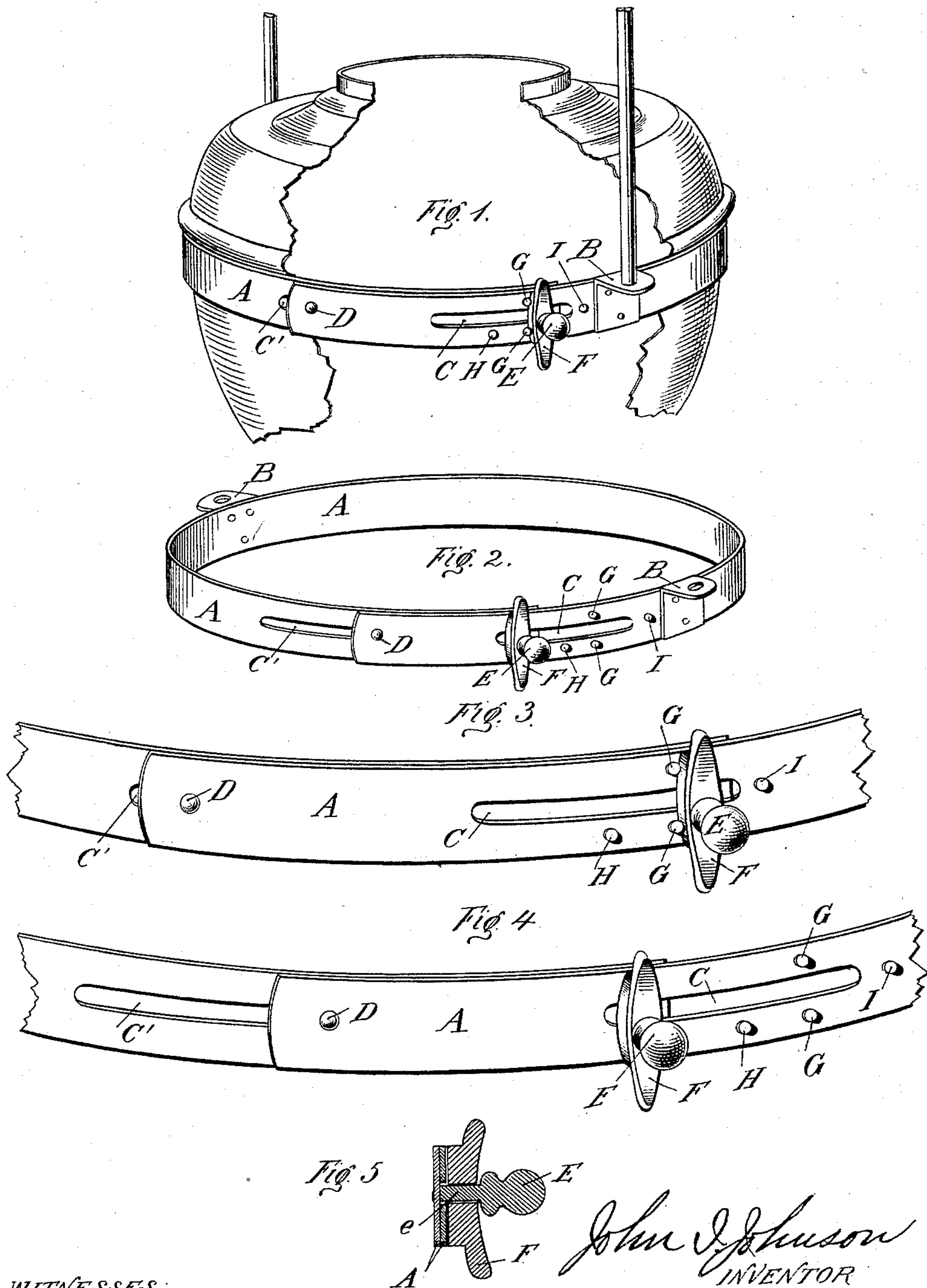


(No Model.)

J. I. JOHNSON.
SUSPENDING DEVICE.

No. 483,615.

Patented Oct. 4, 1892.



WITNESSES
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UNITED STATES PATENT OFFICE.

JOHN I. JOHNSON, OF MERIDEN, CONNECTICUT, ASSIGNOR TO THE EDWARD MILLER & COMPANY, OF SAME PLACE.

SUSPENDING DEVICE.

SPECIFICATION forming part of Letters Patent No. 483,615, dated October 4, 1892.

Application filed July 12, 1892. Serial No. 440,064. (No model.)

To all whom it may concern:

Be it known that I, JOHN I. JOHNSON, a citizen of the United States, residing at Meriden, New Haven county, Connecticut, have invented a new and useful Improvement in Sus-
5 pending Devices, of which the following is a specification.

My invention relates to that class of sus-
10 pending devices in which an expansible ring is used to support a lamp or other article. It is intended to produce a ring simple, easily operated, and not liable to accidental de-
rangement.

In the accompanying drawings, Figure 1
15 represents in perspective a ring embodying my invention in its closed or operative position. Fig. 2 is a similar view of the ring, opened to its largest size. Figs. 3 and 4 are partial perspective views on an enlarged
20 scale. Fig. 5 is a vertical section through the locking portion of the device.

The same letters refer to like parts in the several views.

A designates a ring; B B, ears; C C', slots
25 near the ends of the ring A; D, a guide-rivet; E, a thumb-piece or handle provided with a shank or pin *e*; F, a button; G G, H, and I, pins or studs adapted to coact with the but-
ton F.

30 In the example of my invention illustrated in the drawings the ring A may preferably be a resilient metal band with overlapping ends adapted when closed to surround a lamp or other article to be suspended immediately be-
35 neath a bead or projection on the lamp, said projection seating upon the upper edge of the closed ring, as shown in Fig. 1 of the draw-
ings. Ears B B upon the ring A may be used to secure the ring to a "harp" or hanger. As
40 shown, a shouldered rivet D plays in a longitudinal slot C', cut through the ring A near its inner end. The function of the slot C' and rivet D is to maintain the ring in a substan-
tially circular form at all times and to limit
45 its expansion. Near the outer end of the ring A is another longitudinal slot C, through which plays the shank or pin *e* of the thumb-
piece or handle E. Upon this shank *e* is
50 mounted the button F, free as to rotation on said shank. The ring A is maintained in its closed or operative position by the engage-

ment of the button F with two pins or studs
G G, projecting from the ring A in a vertical
line on opposite sides and near the inner end
of the slot C. Near the inner end of the slot
55 C and in line therewith is the projecting pin
or stud I. At one side of the slot C and a
short distance beyond the pins G G is the pin
or stud H. The functions of these pins H and
I will appear in the explanation of the oper-
60 ation of the device. It will be noted that the
operative portion of the button F is of the
form of an elongated ellipse, or rather of the
form of two convex wedges united at their
butts. As shown, the button is formed with
65 extending arms above the height of the pins
G H I, and so as not to engage therewith.

The operation of the device will be readily
understood from an examination of the draw-
ings. To remove the lamp or other suspended
70 article, it is first raised somewhat to permit a
slight contraction of the ring. The button F
is then rotated on the shank *e*, so that it may
pass between the pins G G. In practice the
contraction of the ring A and the rotation of
75 the button F are both accomplished by a
pressure of the operator's finger on one of the
projecting arms on the button F. The ring
A then expands by its own resiliency and the
lamp may be lowered through the ring. To
80 reinsert the lamp, it is raised through the ring
A, so that its largest diameter below the bead
is above the ring. The operator then con-
tracts the ring by taking hold of or pressing
against the thumb-piece E. If the longitudi-
85 nal axis of the button F happen to nearly
coincide with that of the slot C, the button
will pass between the pins G G. Should this
not be the case, the button F will be rotated
on its axis by striking one of its ends against
90 the pin H, so that, as before, the button will
pass freely between the pins G G. As the
button F reaches the inner end of the slot C
its forward end strikes the pin I, by means of
which the button is rotated, so that its longer
95 axis is substantially transverse to that of the
slot C. The handle E then being released by
the operator the ring A expands until one side
of the button F strikes against both pins G G,
securely locking the ring in its normal or
100 closed position. The lamp is then lowered,
so that its bead or projection rests upon the

upper edge of the ring A. The lamp below the bead is of such a size as to fill the ring, so that the slight reduction of diameter necessary to its unlocking cannot occur until the lamp is again raised. In this way accidental displacement of the lamp is avoided.

United States Patents Nos. 424,712 and 455,878 have heretofore been granted on my application. In both these patents means were provided for preventing the accidental unlocking of the ring.

I do not of course claim herein anything described or shown in either of the above-named patents. I do not consider myself limited to the precise form of the device herein shown and described. It is obvious that I am entitled to the use of any similar construction which may fall within the scope of my invention.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is as follows:

1. In a suspending device, in combination, an expansible ring the ends of which overlap each other, a slot in the outer of said ends, a pin attached to the inner of said ends and passing through said slot, a button rotatably secured on said pin, and studs or projections on the outer of said ends, one on each side of said slot, said button being adapted to pass between said studs and to engage with said

studs to maintain said ring in its normal or closed position, substantially as described.

2. In a suspending device, in combination, an expansible ring the ends of which overlap each other, a slot in the outer of said ends, a pin attached to the inner of said ends and passing through said slot, a button rotatably secured on said pin, studs or projections on the outer of said ends, one on each side of said slot, said button being adapted to pass between said studs and to engage with said studs to maintain said ring in its normal or closed position, and a stud, as H, at one side of said slot, substantially as described.

3. In a suspending device, in combination, an expansible ring the ends of which overlap each other, a slot in the outer of said ends, a pin attached to the inner of said ends and passing through said slot, a button rotatably secured on said pin, studs or projections on the outer of said ends, one on each side of said slot, said button being adapted to pass between said studs and to engage with said studs to maintain said ring in its normal or closed position, and a stud, as I, substantially in line with and near the inner end of said slot, substantially as described.

JOHN I. JOHNSON.

Witnesses:

GEO. L. COOPER,
A. F. SANBORN.