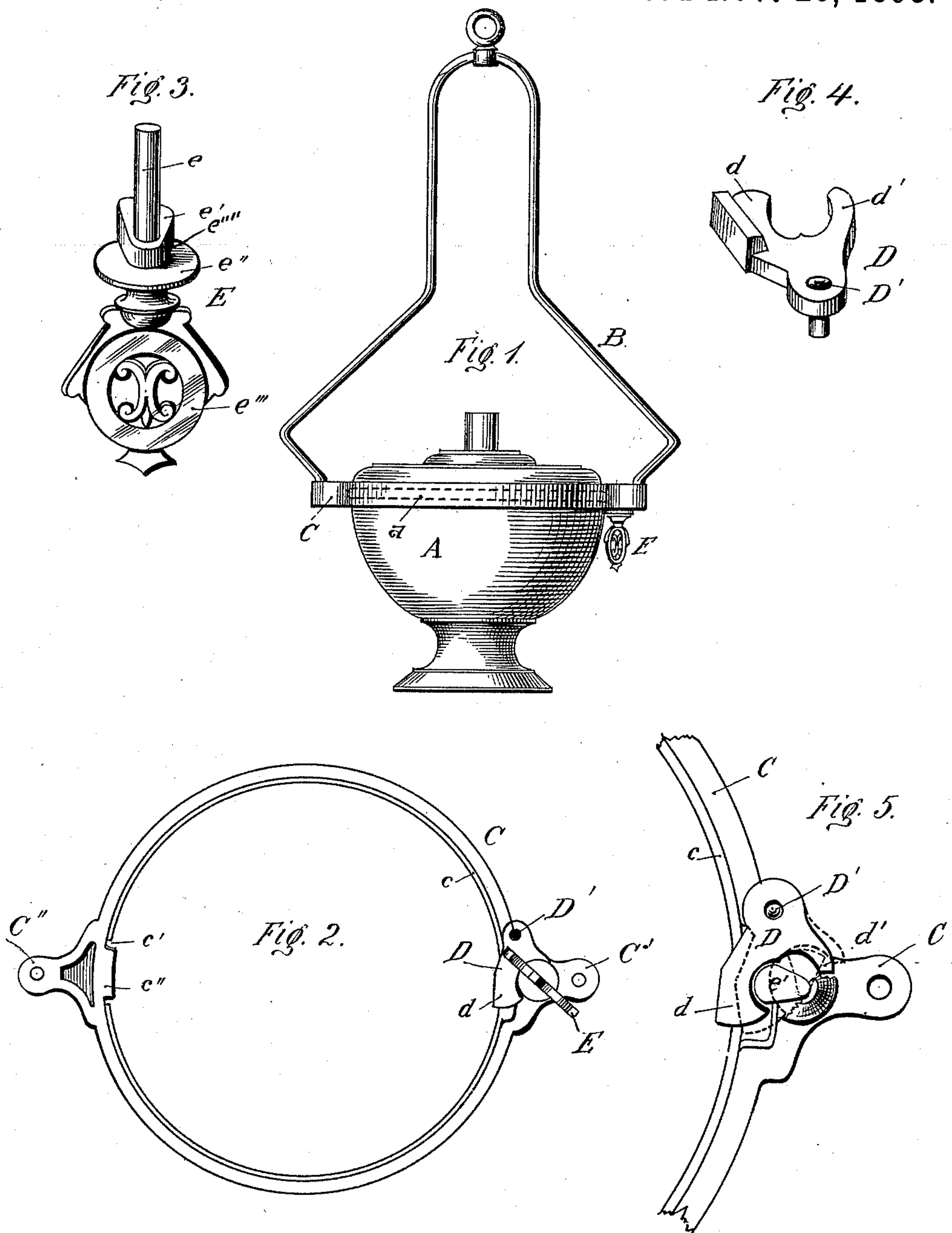


(No Model.)

W. C. HOMAN.
SUSPENSION DEVICE.

No. 509,621.

Patented Nov. 28, 1893.



WITNESSES
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SUSPENSION DEVICE.

SPECIFICATION forming part of Letters Patent No. 509,621, dated November 28, 1893.

Application filed April 4, 1892. Serial No. 427,781. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. HOMAN, a citizen of the United States, residing at Meriden, New Haven county, Connecticut, have
5 invented a new and useful Improvement in Suspension Devices, of which the following is a specification.

My invention relates to that class of suspension devices in which a lamp or similar
10 article is supported within a ring and is intended to facilitate the introduction or removal of the lamp to or from the ring.

In the accompanying drawings Figure 1 represents in perspective a lamp suspension device embodying my invention. Fig. 2 is an
15 inverted plan view of the ring. Figs. 3 and 4 are perspective views of parts detached. Fig. 5 is an enlarged view of a portion of the ring shown in Fig. 2 partly broken away to
20 show the operation of the device.

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

A designates a lamp; *a*, an annular bead on the lamp A; B, a "harp" or lamp supporting
25 frame; C, a ring; C', C'', ears on the ring C; *c*, an internally projecting rim or flange in the ring C; *c'*, a recess in the rim *c*; *c''*, a lug in the ring C; D, a lock button; *d*, *d'*, arms on the button D; D', a pivot on which the
30 button D turns; E, a key consisting of stem *e*, cam *e'*, flange *e''*, and thumb pieces *e'''*, *e''''*, Fig. 3, a shoulder on the cam *e'*.

In the example of my invention illustrated the lamp A, bead *a*, harp B, ring C, ears C' and C'', rim *c* and recess *c'* are similar in
35 structure and function to the similar parts shown in my United States Patent No. 401,781, dated April 23, 1889. Instead of two interiorly projecting lugs *c''* as shown in the drawings of said patent I here show only one such
40 lug. It is evident, however, that in this regard there is no functional difference between the two devices. As shown the lug *c''* is adjacent to the ear C''. On the opposite side
45 of the ring C and near the ear C' the lock button D is secured by means of the pivot D'. The lock button D is recessed so as to form two arms *d* and *d'* and is free as to partial rotation on the pivot D', so that its arm *d* may
50 swing into the ring opposite to and on a plane with the lug *c''*. The stem *e* of the key E

passes upward through a hole drilled for it in the ring C and is headed or provided with a nut on the upper side of the ring so that the key E may rotate on its stem *e*. The cam *e'*
55 on the key E is adapted, as shown in Fig. 2 of the drawings, to strike against the arms *d* and *d'* of the lock button D so as to throw the inner arm *d* of said lock button into or out of the ring C. It will be noted that the
60 face of the cam *e'* is shaped to correspond with that of the recess between the arms *d* and *d'* so that the button D is securely locked either in its working or withdrawn position. If desired the cam *e'* may be provided with a
65 projecting shoulder, *e''''* as shown in Fig. 3, adapted to press against the free end of the arm *d* in passing. In this case there will be additional frictional resistance to the unlocking of the button D forming a safeguard
70 against accidental displacement.

It is clear that the cam *e'*, as shown, is arranged to turn in such a direction as to entirely free itself from the arms *d* and *d'*, in
75 other words so as to strike first against the outer ends of said arms. It will also be seen that when the cam *e'* has reached its locking position, as shown in Fig. 5, its further movement in the same direction is prevented by
80 the shape of the opening in the button D between the arms *d* and *d'*.

The flange *e''* on the key E engages with the lower side of the lock button D and acts as an additional support therefor. By means
85 of the thumbpiece *e'''* the key E and indirectly the lock button D are rotated.

The operation of my device will be readily understood from the drawings. The key E being so turned as to withdraw the arm *d* of the lock button D from the ring C the lamp
90 A is inserted into the ring from below, the bead *a* resting upon the lug *c''*. By turning the key E the lock button D is then partially rotated so as to throw the arm *d* under the bead *a* on the lamp A. The lamp A is thus
95 securely held in the ring C, the bead *a* of the lamp resting at opposite sides upon the lug *c''* and the arm *d*. By means of the internal flange *c* above the bead *a* the lamp A is prevented from being lifted from the ring C. It
100 will be seen that when the button D has been turned to its locked position nearly a half

turn must be given the key E before the button D is turned back out of engagement with the bead α of the lamp A. This I consider a great advantage as it forms an efficient safeguard against accidental or careless disengagement of the locking device.

I am aware of a previous patent in which is shown a turn button adapted to rotation and to direct engagement with a bead on the lamp. As before stated my device is superior to this on account of the play which the cam e' has between the arms d and d' of the lock button D so that the key may be turned considerably without disengaging the lamp, thereby rendering unlikely that this shall be done without deliberate intention. My device has the additional advantage over that referred to in that the flange e'' on the key E engages with the under side of the button D thereby very much lessening the shear on the pivot D' and thus reducing the liability of breakage and of serious accident.

I do not wish to be understood as claiming anything described or claimed in my previous patent, No. 401,781, to which I have referred above.

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

1. In a lamp supporting ring in combination a lock button pivotally secured to said ring formed with two integral arms, one of which is adapted to be thrown into the pe-

riphery of said ring, a cam working between said arms and means for rotating said cam, substantially as described.

2. In a lamp supporting ring in combination a lock button pivotally secured to said ring formed with two integral arms one of which is adapted to be thrown into the periphery of said ring, a cam working between said arms and adapted to hold said button in its locked position and means for rotating said cam, substantially as described.

3. In a lamp supporting ring in combination a lock button pivotally secured to said ring formed with two integral arms one of which is adapted to be thrown into the periphery of said ring, a cam working between said arms, a shaft on which said cam is mounted and means as a key on said shaft for rotating said cam, substantially as described.

4. In a lamp supporting ring in combination a lock button pivotally secured to said ring formed with two integral arms one of which is adapted to be thrown into the periphery of said ring, a cam working between said arms, a shaft on which said cam is mounted, a flange or shoulder on said shaft adapted to engage with the lower side of said button and means as a key by which said cam is rotated, substantially as described.

WM. C. HOMAN.

Witnesses:

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