

(No Model.)

2 Sheets—Sheet 1.

C. J. PETERSEN.

SUSPENSION DEVICE.

No. 345,172.

Patented July 6, 1886.

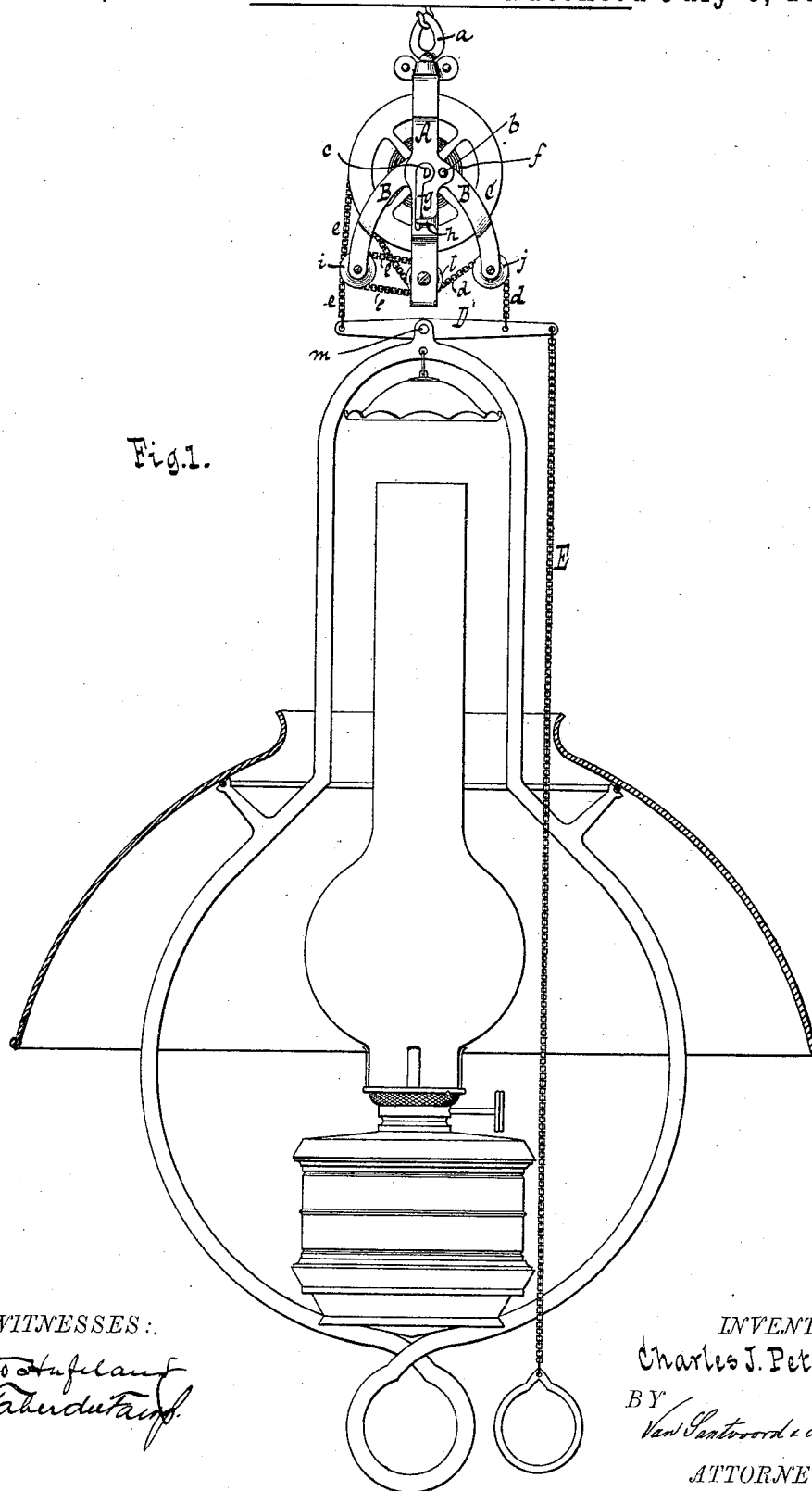


Fig. 1.

WITNESSES:

Edw. H. H. H. H.
A. H. H. H. H.

INVENTOR

Charles J. Petersen

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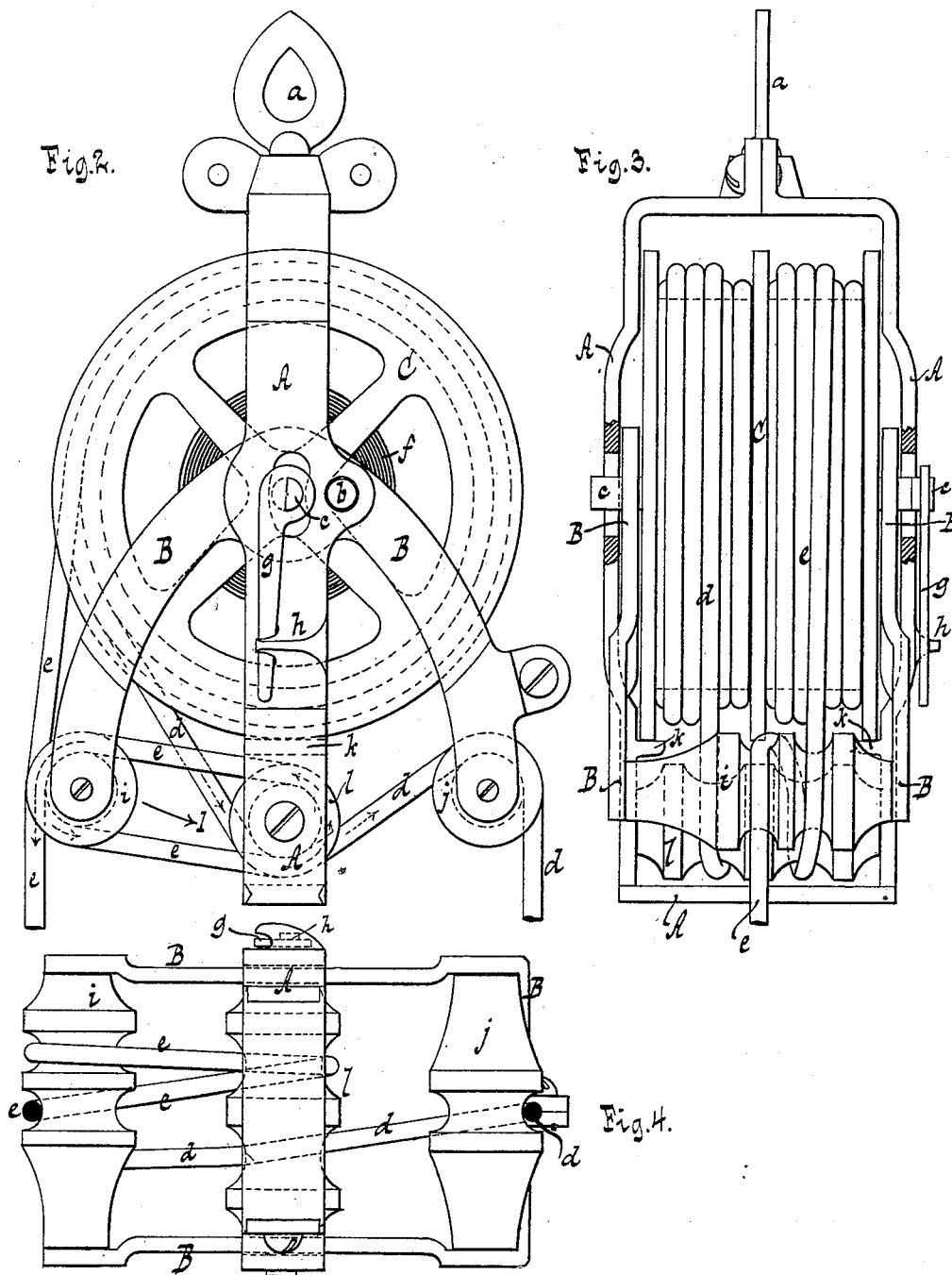
ATTORNEYS

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WITNESSES:

Otto Hufeland

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UNITED STATES PATENT OFFICE.

CHARLES J. PETERSEN, OF PORT CHESTER, NEW YORK.

SUSPENSION DEVICE.

SPECIFICATION forming part of Letters Patent No. 345,172, dated July 6, 1886.

Application filed April 22, 1886. Serial No. 199,829. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. PETERSEN, a citizen of the United States, residing at Port Chester, in the county of Westchester and State of New York, have invented new and useful Improvements in Suspension Devices, of which the following is a specification.

This invention relates to devices for suspending lamps or other articles; and it consists in certain novel features of construction, which are fully pointed out in the following specification and claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a side view of my invention, showing a lamp suspended from it. Fig. 2 is a side view of my suspension device on a larger scale. Fig. 3 is an end view. Fig. 4 is an inverted plan or bottom view.

Similar letters indicate corresponding parts. In the drawings, the letter A designates the main frame, the upper part of which is provided with a loop, *a*, by which my device may be suspended from the ceiling or any other convenient place. To this main frame is connected a swinging frame, B, by a pivot, *b*. The swinging frame carries a spindle, *c*, on which the drum C rotates, being revolved in one direction by the suspension-cords *d* and *e*, and in the other by a coiled spring, *f*, located in said drum and fastened to it at one end, while the other end is fastened to the spindle *c*. One end of this spindle carries a wrench or crank, *g*, by which it may be rotated for the purpose of adjusting the tension of the spring *f*, which is done by turning said wrench or crank until the spring has the desired tension, when the free end thereof is passed under a shoulder or stop, *h*, on the main frame A, holding the wrench in position and preventing the unwinding of the said spring. The swinging frame also carries two guide-rollers, *i j*, placed on opposite sides of the pivot *b*. On the drum C are wound, both in one direction, the two suspension-cords *d* and *e*, the first of which I shall call the "release" suspension-cord and the latter the "brake" suspension-cord, for reasons which will be hereinafter explained.

To the main frame is attached a stationary brake-shoe, K, against which the periphery of the drum impinges, preventing said drum from turning, when a weight is suspended from

my suspension device. This action of the drum on the brake-shoe is effected by turning the swinging frame, which carries the drum in the direction of the arrow 1, Fig. 2, so that the drum may be pressed against the brake-shoe with such force as to produce sufficient friction to overcome the action of the spring *f* in one direction, and the article supported in the other. This I accomplish by mounting a guide-roller, *l*, in the main frame, over which I pass the brake suspension-cord *e* after the same has passed under the roller *i*, by which construction, which is on the well-known principle of the pulley, I bring a force to bear on that end of the lever carrying the guide-roller *i* which is equal to twice the weight of the article suspended from my device and sufficient to produce the required friction between the drum and the brake-shoe; but should this friction not suffice, it is evident that it may be increased by again passing the brake suspension-cord over both guide-rollers *i* and *l*. By this method of controlling the action of the drum, I can suspend and hold in place articles of different weights without readjusting the tension of the coiled spring *f*. The release suspension-cord *d* passes from the drum C under the guide-roller *l*, and then over the guide-roller *j* in that end of the swinging frame B opposite to the one carrying the guide-roller *i*; but it may also pass directly from the drum to the guide-roller *j*. By applying sufficient force to this suspension-cord the swinging frame is turned in a direction opposite to that indicated by arrow 1, Fig. 2, thereby raising said drum and releasing it from the action of the brake-shoe, leaving it free to be turned in either direction. After leaving the guide-rollers in the swinging frame the cord may pass directly to the article to be suspended. When the latter is an article which it is necessary to suspend in an exactly perpendicular line—such as a lamp, for instance—I secure the ends of both of the cords to a suspension-bar, D, to which I attach said lamp or other article by a pivot, *m*, or when perpendicularity is not indispensable I may form a rigid connection between the suspended article and the bar D. If found desirable, I may also attach a releasing-cord, E, to this bar, as shown in Fig. 1. If it is found necessary, I can make the guide *l* in the main frame, over which both

suspension-cords pass, in the shape of two separate rollers, one for each cord.

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

5 1. A suspension device combining in its structure the following elements, to wit: the main frame A, the swinging frame B, pivoted thereto, a brake-shoe, *k*, attached to the main frame, a guide-roller, *l*, mounted in the latter,
10 two guides, *i j*, on opposite sides of the swinging frame, a rotating spring-drum carried by the latter, the release suspension-cord *d* passing around the drum over the guide *j*, and thence to the article to be suspended, and the
15 brake suspension-cord *e* passing around the drum and the guides *i* and *l*, and thence passing to the article to be suspended, substantially as and for the purpose described.

2. The combination, with the main frame A
20 and the swinging frame B, pivoted to the main frame, of a brake-shoe, *k*, attached to the main frame, a guide-roller, *l*, mounted in said main frame, two guides, *i j*, on opposite sides of the swinging frame, a rotating spring-drum carried by the swinging frame, the release sus-
25 pension-cord *d* passing around the drum and over the guide *j*, and the brake suspension-cord *e* passing around the drum and around both the guides *i* and *l*, and a bar, D, connected with the suspension-cords, substantially
30 as described.

3. The combination, with the main frame A and the swinging frame B, pivoted to the main frame, of a brake-shoe, *k*, attached to the main
35 frame, a guide-roller, *l*, mounted in said main frame, two guides, *i j*, on opposite sides of the swinging frame, a rotating spring-drum carried by the swinging frame, the release suspension-cord *d* passing around the drum and
40 over the guide *j*, the brake suspension-cord *e*,

passing around said drum and around both guides *i* and *l*, and the bar D, suspended from both suspension-cords, and having the article to be suspended connected therewith, substantially as described.

4. The combination, with the main frame A and the swinging frame B, pivoted to the main frame, of a brake-shoe, *k*, attached to the main frame, a guide-roller, *l*, mounted in said main frame, two guides, *i j*, on opposite sides of
50 the swinging frame, a rotating spring-drum carried by the swinging frame, the release suspension-cord *d*, passing around the drum and over the guide *j*, and the brake suspension-cord *e*, passing around the drum and both guides
55 *i* and *l*, the bar D, suspended from both suspension-cords, and a pivotal connection between said bar and the article to be suspended, substantially as described.

5. The combination, with the main frame A
60 and the swinging frame B, pivoted to the main frame, of a brake-shoe, *k*, attached to the main frame, a guide-roller, *l*, mounted in said main frame, two guides, *i j*, on opposite sides of the swinging frame, a rotating spring-drum carried by the swinging frame, the release sus-
65 pension-cord *d*, passing around the drum over the guide *j*, the brake suspension-cord *e*, passing around said drum and around both guides *i* and *l*, the bar D, suspended from both sus-
70 pension-cords, and having the article to be suspended connected therewith, and the releasing-cord *d*, substantially as described.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscrib-
75 ing witnesses.

CHARLES J. PETERSEN. [L. S.]

Witnesses:

W. HAUFF,

A. FABER DU FAUR, Jr.