(No Model.)

H. LANG & C. A. GRAETER.

EXTENSION DEVICE FOR LAMPS.

No. 334,243. Patented Jan. 12, 1886.

Fig. 1.

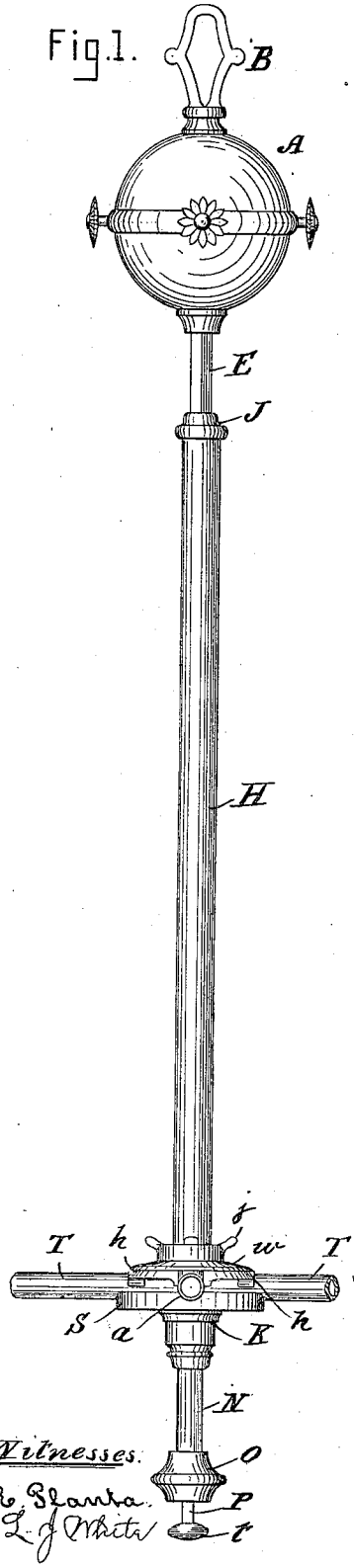


Fig. 2.

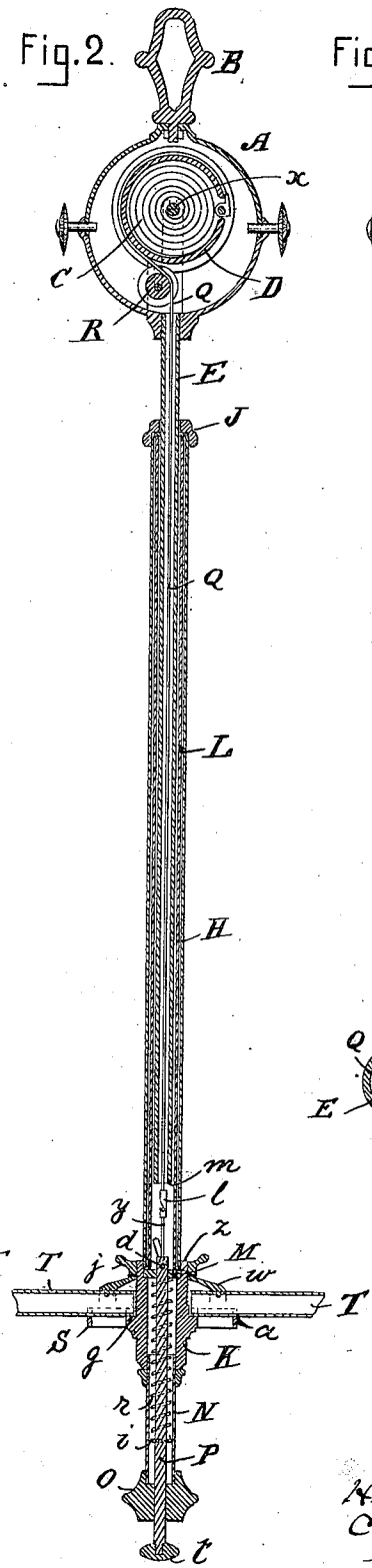
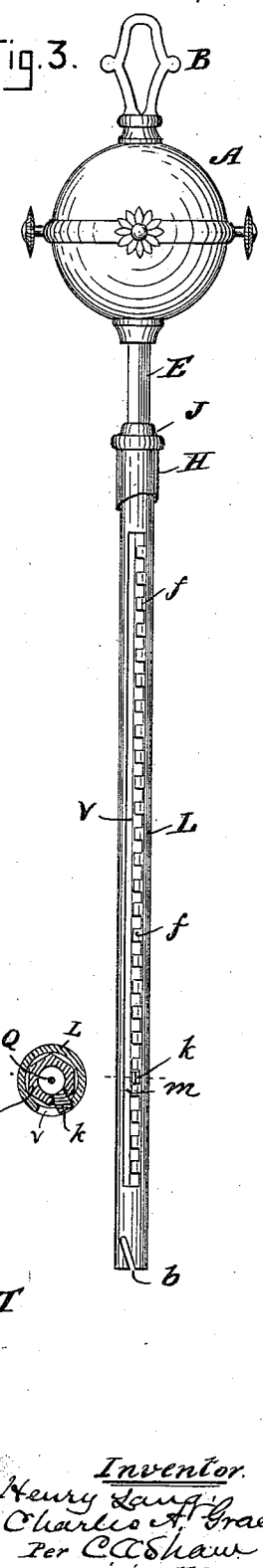


Fig. 3.



Witnesses.
E. Blanka.
L. J. White

Inventor.
Henry Lang &
Charles A. Graeter,
Per C. A. Shaw
his Attorney.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

HENRY LANG AND CHARLES A. GRAETER, OF ANDOVER, MASSACHUSETTS.

EXTENSION DEVICE FOR LAMPS.

SPECIFICATION forming part of Letters Patent No. 334,243, dated January 12, 1886.

Application filed September 24, 1885. Serial No. 178,013. (No model.)

To all whom it may concern:

Be it known that we, HENRY LANG and CHARLES A. GRAETER, of Andover, in the county of Essex, State of Massachusetts, have invented a certain new and useful Improvement in Chandeliers, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation showing our improved chandelier closed, the brackets being represented as broken off; Fig. 2, a vertical longitudinal section of the same, and Fig. 3 a diagram showing the locking-tube detached.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

Our invention relates more especially to that class of chandeliers which are extensible and designed to support lamps or candlesticks; and it consists in a novel construction and arrangement of the parts, as hereinafter fully set forth and claimed, by which a more effective and otherwise desirable article of this character is produced than is now in ordinary use.

The nature of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the head of the chandelier, which is preferably spherical in shape, and is provided with the suspensory loop B. The head is hollow, and disposed within the same there is a coiled spring, C, incased in the barrel D, the inner end of the spring being secured to a fixed stud, *x*, and the other to the interior of the barrel.

Projecting from the lower side of the head A, and opening into the same, there is a tube, E, terminating at *m*, and fitted to slide vertically on said tube there is a tubular case, H, provided at its upper end with the cap J, through which the tube E passes, its lower end being screwed into the upper end of the body K at *z*.

Disposed loosely within the case H, and around the tube E, there is a locking-tube, L, the lower end of which rests on the diaphragm M in the upper part of the body K. The tube L is provided with an elongated slot, *v*, and with a series of serrations or teeth, *f*, formed in the body of the tube along one side only of said slot.

Projecting from the bottom of the body K there is a short tube, N, provided at its lower end with a cap, O, and fitted to slide vertically in said cap and the diaphragm M there is a rod, P, provided with a knob, *t*, at its lower end. A coiled spring, *r*, is disposed around the rod P within the tube N, the lower end of said spring resting on a shoulder, *i*, formed on said rod, and its upper end abutting against the lower side of the diaphragm M, to force the rod down to its fullest extent. A cord or tape, Q, is wound around the barrel D within the head A, said cord passing over a guide-pulley, R, and downwardly through the tube E, its lower end being detachably connected by a hook, *l*, to an elastic rod, *y*, projecting from the upper end of the rod P. An inclined or diagonal slot, *b*, is formed in the lower end of the tube L, and projecting horizontally from the upper end of the rod P, and fitted to work in said slot, there is a pin, *d*. An annular disk, S, is secured to the body K, said disk being provided with notches *a* in its upper edge for the reception of the brackets or arms T. An annular locking-cap, *w*, less in diameter than the disk S, is also disposed around the upper portion of the body K and rests on the arms T, said cap being provided with a series of notches, *h*, on its under side to receive said arms. An annular shoulder or rabbet, *g*, is formed on the body K, on which the inner ends of the arms T rest, said arms being secured in position by a nut, *j*, which is screwed onto the upper end of said body and forces the cap *w* down onto the arms. A pin, *k*, projects horizontally from the lower end of the tube E into the elongated slot *v*, in which it works, said pin being adapted to engage the teeth *m* on the tube L.

In Figs. 1 and 2 the body of the chandelier is represented as elevated to its highest position and locked by the pin *k* and serrated locking-tube L; but in the use of our improvement, whenever it is desired to extend the chandelier or to lower the body K and lamps supported by the arms T, the rod P is pushed upwardly, compressing the spring *r*, and causing the pin *d*, working in the slot *b*, to partially rotate the tube L, thereby disengaging

the teeth *f* of said tube from the pin *k*, and enabling the tubes H L to be drawn down or the chandelier to be extended, in a manner which will be readily obvious without a more explicit description.

After the lights have been lowered or the chandelier extended as far as desired the rod P is released, permitting the spring *r* to force said rod down into the position shown in Fig. 2, and the pin *d* to partially rotate the tube L, and thus cause its teeth *f* to again engage the pin *k* and lock the chandelier in its extended position.

From the foregoing it will be seen that when the rod P is pushed in or up to its fullest extent and held in that position the chandelier will be unlocked, or the pin *k* will be disengaged from the teeth *f* of the tube L, thereby permitting the body K to be readily raised or lowered, as desired; also, that when the rod P is released the spring *r* will force it downwardly or out, thereby causing the pin *d* to partially rotate the tube L, and the pin *k* to engage the teeth *f* and lock the chandelier in whatsoever position it may be in at the time.

It will be understood that the spring C is to be wound up and so adjusted and arranged as to exert a constant strain on the cord Q; also, that said spring should be sufficiently strong or of such tension as to enable it to properly support the parts suspended to said cord.

The arms T are represented as broken off, as it is not deemed necessary to show the lamps or candlesticks they are designed to carry, which may be of any suitable style or kind.

The tube N may be formed integral with the body K, if desired, and the arms T be made round or of any form or style to suitably support the lamps or candlesticks.

The cap O not only acts as a cap for the tube N, but subserves another important purpose—viz., that of a cap by which the chandelier may be drawn down, the second and third fingers of the hand being placed astride said cap in pulling down the body K, and the thumb of the same hand against the under side of the knob *t*, to push up the rod P and disengage the pin *d* and teeth *f*, thus enabling the chandelier to be unlocked and extended by the use of one hand only.

The essential features of our invention consist in the locking mechanism and the means for detachably securing the arms T in the body K, as described.

Having thus explained our invention, what we claim is—

1. In a chandelier of the character described, the tube L, provided with the teeth *f* and slots *b v*, in combination with the tubes E H N, body K, rod P, spring *r*, pin *d*, cord Q, spring C, and head A, substantially as described.

2. The cap O, body K, tubes N E H L, rod P, springs *r* C, and cord Q, the tube L being provided with the slots *v b* and teeth *f*, and the rod P with the pin *d*, all constructed and arranged to operate substantially as set forth.

HENRY LANG.
CHARLES A. GRAETER.

Witnesses:
ROBERT BELL,
GEORGE W. FOSTER.