

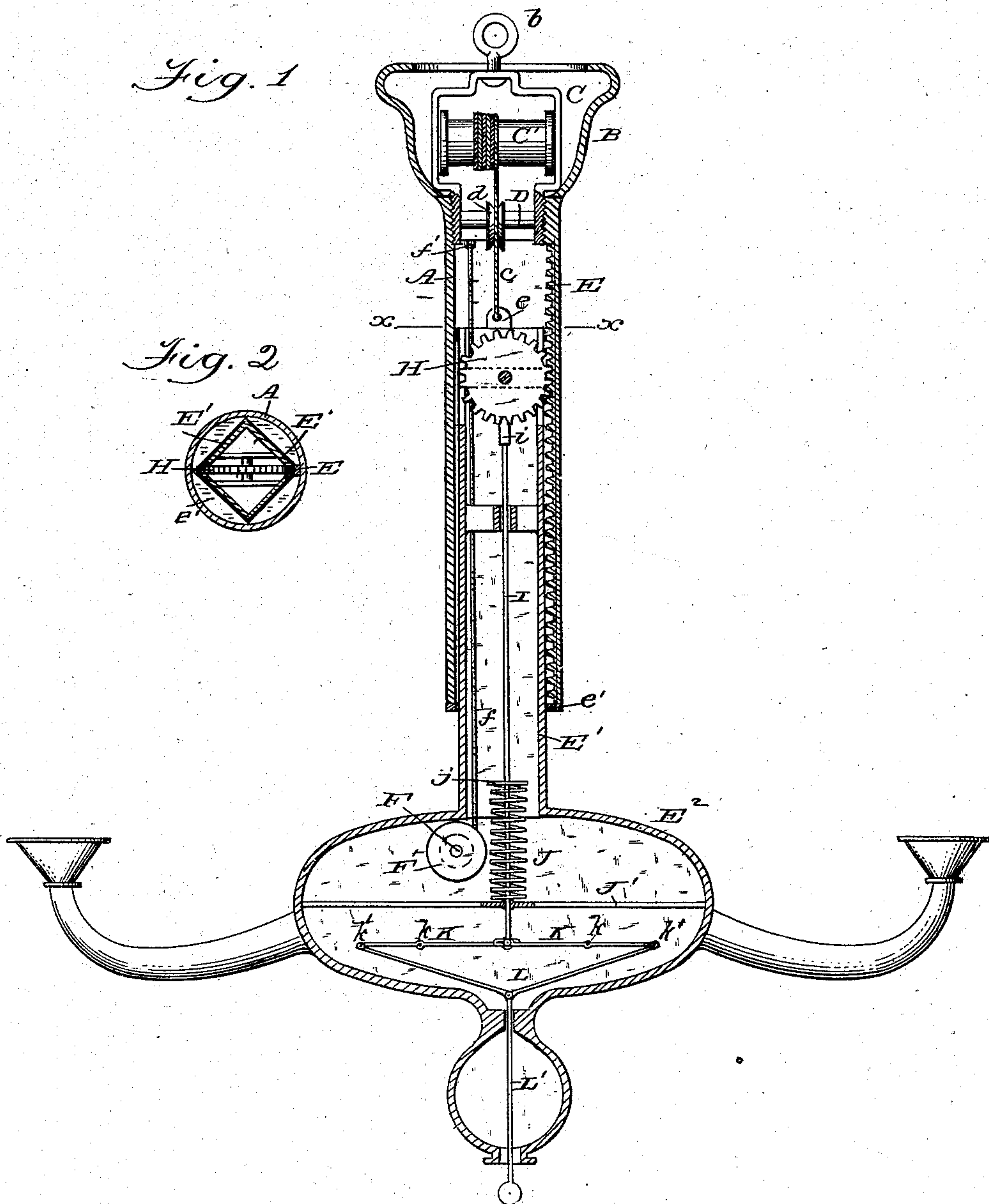
(No Model.)

4 Sheets—Sheet 1.

S. S. NEWTON.
CHANDELIER.

No. 258,105.

Patented May 16, 1882.



Witnesses;

Walter Fowler
J. S. Barker.

Inventor;

Stephen S. Newton
by S. M. Reday & Bliss
attys

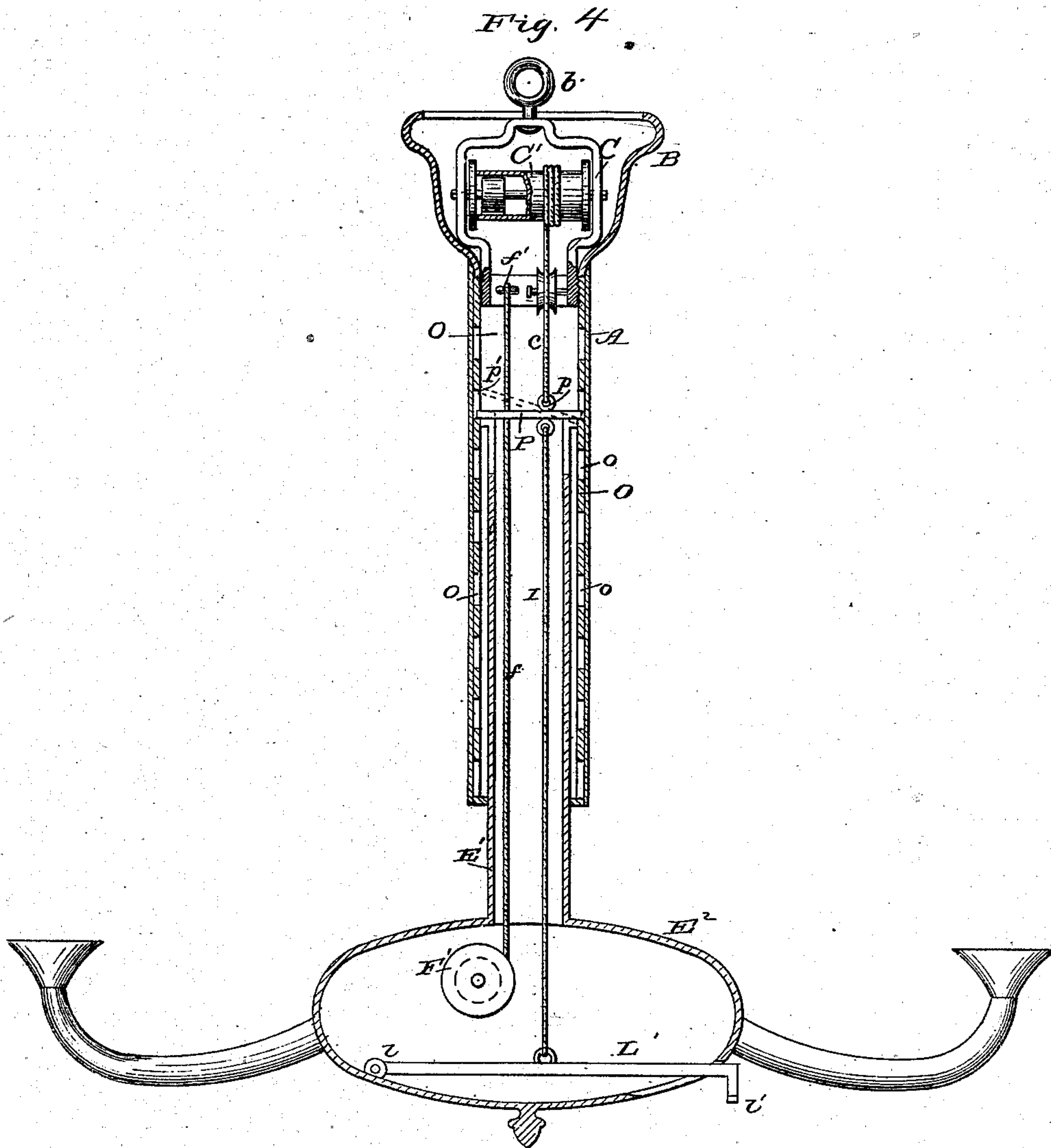
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S. S. NEWTON.
CHANDELIER.

No. 258,106.

Patented May 16, 1882.



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(No Model.)

4 Sheets—Sheet 4.

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Fig. 5.

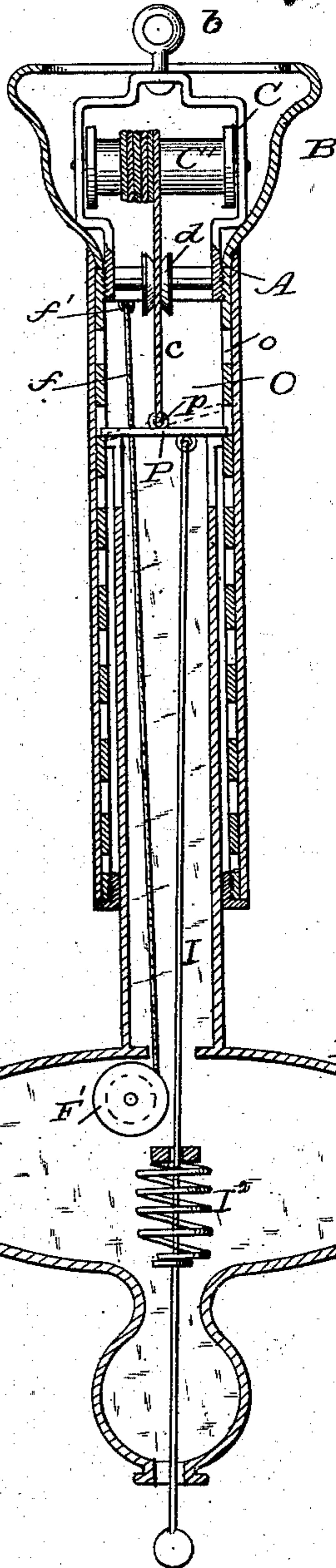
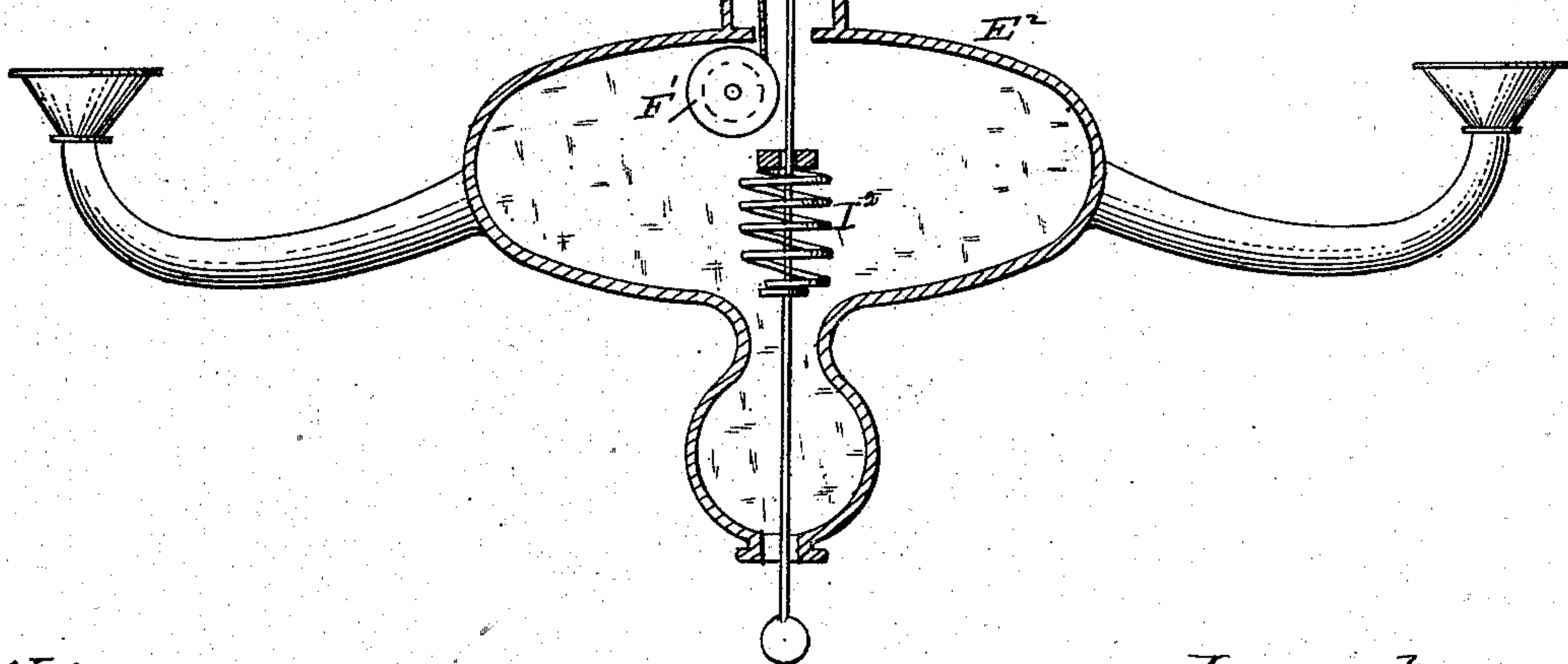
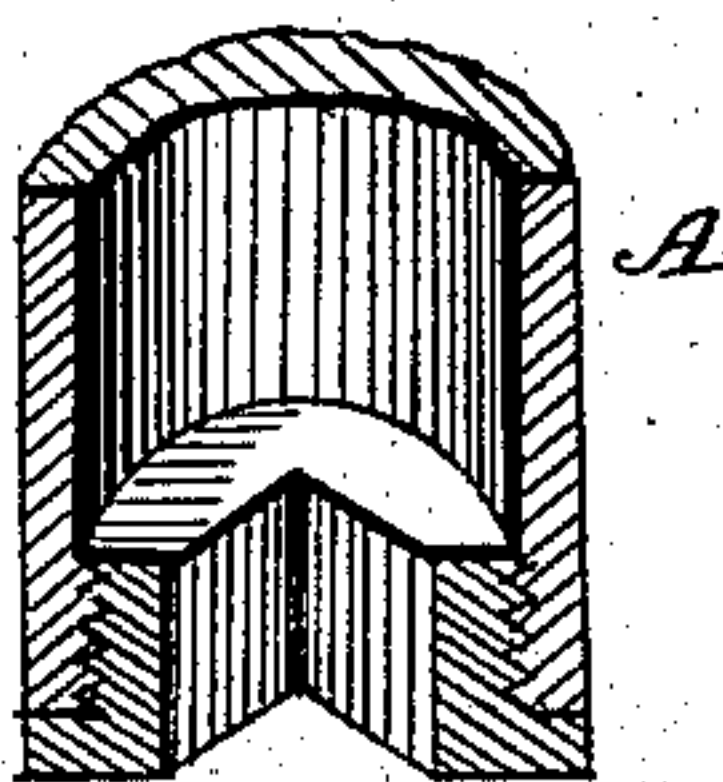


Fig. 9.



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UNITED STATES PATENT OFFICE.

STEPHEN S. NEWTON, OF BINGHAMTON, NEW YORK.

CHANDELIER.

SPECIFICATION forming part of Letters Patent No. 258,105, dated May 16, 1882.

Application filed December 27, 1881. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN S. NEWTON, a citizen of the United States of America, residing at Binghamton, in the county of Broome and State of New York, have invented certain new and useful Improvements in Chandeliers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Heretofore it has been customary in constructing chandeliers to employ a stationary tube and a sliding tube, one carrying a spring mechanism and the other having attached to it the end of a spring or the end of a cord running to the spring. In practice it is found that the springs ordinarily used are not of sufficient power to attain the desired result if heavy chandeliers are thus constructed.

My invention relates to a new construction of chandelier which has, first, two or more sections of tubing arranged telescopically; secondly, a stopping mechanism concealed within the tubes, adapted to lock the chandelier in any position vertically; thirdly, a cord-winding mechanism concealed within an upper bulb attached to the upper stationary tube-section, the end of its cord being attached to the lower sliding tube-section; fourthly, a cord-winding mechanism concealed within a lower bulb carried by the lower sliding tube-section, with the end of its cord attached to the upper stationary section; and, fifthly, to a stop mechanism constructed and arranged to permit the free passage through it of the last said cord.

Figure 1 is a vertical section of a chandelier embodying my improvements. Fig. 2 is a transverse section on the line xx , Fig. 1. Figs. 3, 4, 5, and 6 are vertical sections of slightly-modified forms. Fig. 7 is a cross-section of the device shown in Fig. 6 on line $x'x'$. Fig. 8 is a similar section of a modified form of the same devices, the locking-bars in this figure being shown as made semi-cylindrical. Fig. 9 is a sectional perspective view of the lower end of the outer tube shown in Fig. 5.

Referring to Fig. 1, A is the upper tube-section,

provided with the bulb or inclosing-shell B at its upper end and a swiveling hook or loop, b .

C is a frame supported in shell B, and having mounted thereon a spring-drum, C' , to which is attached a cord or chain, c .

D is a shaft carrying a guiding-roller, d .

E is a rack formed or attached to the inner wall of the tube A. E' is the lower sliding tube-section, carrying bulb E^2 at its lower end. It has a shaft, F, with a spring-drum, F' , mounted thereon.

f is a cord or chain, attached at one end to the drum F' and at the other to the upper stationary tube-section, A, as at f' .

A guiding roller or pulley may be mounted in the bulb E^2 and adapted to properly guide the cord f into the tube E' , and so situated as to guide said cord properly relatively to the stopping mechanism to be described.

The cord c , running from the upper stationary drum, C' , is secured to the lower tube-section, E' , by means of ears e or a cross-bar. At the upper end of the lower sliding tube-section, E' , there is mounted a stop-wheel, H, preferably constructed as shown, with teeth or cogs adapted to engage with the stationary rack E. If the wheel H be at any point prevented from rotating, it will be seen that the said wheel and rack will operate as a stop or lock for the sliding part of the chandelier. I have shown one form of mechanism for thus preventing the rotation of the wheel H. This mechanism consists of a rod, I, carrying a detent, i , at the upper end, a spring, J, for thrusting said detent into engagement with wheel H, pivoted levers K K for drawing rod I down, a yoke, L, and a thumb-piece, L' , for pushing upward the outer ends of levers K K. These levers K K are at points between their ends pivoted to the bulb or shell, as shown at $k k$ in the drawings, so that the inner ends can be thrust up or down by means of the yoke L, the arms of which are respectively pivoted to the outer ends of these levers K K. At their inner ends the levers are provided with slots, through which passes a pin carried by the bar I. When the inner ends of the levers K K are forced down the bar I is drawn down also, the slots permitting the levers to swing down to a sufficient extent. The spring J may be ar-

ranged to bear against the cross-bar J' in the bulb E^2 , and against the pin or cross-piece j , attached to the bar I . By thrusting upward against the thumb-piece L' the detent i will be drawn out of engagement with wheel H , and the lower part of the chandelier can be then moved up or down to any desired point. When in the desired position the hand is withdrawn from the thumb-piece L' , the detent i is thrust into engagement with wheel H , and the chandelier is locked. Instead of this mechanism, a cord or chain and a pivoted dog could be employed to lock and unlock the wheel H .

In order to prevent the rotation of either of the tube-sections A E' relatively to each other, the one or the other may be slotted and the other be provided with a pin or screw. I prefer, however, to make the sliding tube polygonal in cross-section and attach to the bottom of the stationary tube a cap, e' , having a polygonal aperture for the sliding tube.

In the construction shown in Figs. 1 and 2 the aperture and the sliding tube are made square. The cord f is arranged to pass up through the stopping mechanism to its point of attachment at f' . In Fig. 3 substantially the same construction is shown, except that a modified locking mechanism is employed. This locking mechanism consists of a hollow tapering portion, M , formed upon the upper end of the sliding tube-section E' , and a correspondingly-shaped opposite portion, M' , connected with the upper drum by the cord c . The rod or link I is pivoted to the part M' of the stop. At the lower end it is pivoted to the thumb piece or lever L' , which in this case is situated substantially horizontally, being pivoted at l within the shell and provided with a catch-piece, l' , projecting through the shell. The cord F passes upward through an aperture formed in the hollow part M of the stop to its point of attachment at f' . By pulling down on the thumb-lever L' and pushing up slightly on the chandelier the tapering or wedge-shaped locking-pieces are disengaged, and the chandelier can be moved up or down to any desired point. In this case the locking is effected by crowding the part M' outward against the stationary tube. In this case, as in the construction shown in Fig. 1, the lock is situated at the upper end of the sliding tube.

In Fig. 4 a construction is shown having a supplemental tube, O , situated in the upper tube-section, A . It is provided with two diametrically-opposite series of perforations, o , to receive the stop-piece. This stop-piece P is pivoted across the upper end of the sliding tube, and is a little longer than the inner diameter of said tube. The upper cord, c , is attached to the stop-piece P by an eye, p . The thumb-lever L' is connected to the stop-piece P by a cord or link, I , attached to the stop. The cord f passes by or through the stop mechanism to its point of fastening at f' . When it is desired to unlock the chandelier it is thrust upward a little until the stop-piece P strikes

against the shoulders p' , and then by a downward pull on the thumb-lever L' said stop-piece is drawn into the position shown in dotted lines, such position preventing it from any longer engaging with the recesses in the tube O . When thus disengaged the chandelier can be moved into any desired position and again locked by releasing the thumb-piece L' , for the stop-piece P will instantly seat itself in the nearest aperture o in tube O .

In Fig. 5 is shown a construction substantially similar to that in Fig. 4, the difference being that the stop-piece P is thrust upward by means of the thumb-piece I , such upward thrusting resulting in a disengagement of the stop-piece with the apertures o , as shown in dotted lines. The spring I^2 operates to thrust the link I down when the hand of the operator is disengaged.

In Fig. 6 there is shown another method of locking the parts of the chandelier together by means of friction, and of permitting the cords of the winding mechanisms to pass properly through the locking mechanism. In this case two locking parts, M' , are used instead of one, as shown in Fig. 3. They are constructed with opposing wedging-faces, which operate to crowd them against a friction-collar or annulus at M^2 in the stationary tube. The cord f from the lower winding mechanism passes through one of the locking-bars M' , or through a slot formed therein. To prevent the locking-bars M' from rotating, they may be made square and passed through a square aperture in the part M^2 , as shown in Fig. 7; or if one of the bars be rigidly secured to the sliding section or the bulb, as shown at M^3 , the sliding section will be prevented from rotating relatively to the stationary section; or a set-screw may be employed, as shown at M^4 in Fig. 3, this figure showing also a portion of the slot M^5 , in which the set-screw moves. The locking-bars M' shown in Fig. 3 are more or less flexible, and therefore the one which is secured to the bulb, as shown at M^3 , is not prevented from swinging outward sufficiently to come in contact with the bearing-piece.

I am aware that chandeliers have heretofore been constructed with a stationary tube and a sliding tube, and devices to prevent the rotation of one tube relatively to the other, and therefore I do not claim such devices, broadly.

What I claim is—

1. In a chandelier, the combination, substantially as hereinbefore set forth, of the following elements, namely: the upper stationary tube-section, a lower sliding tube-section carrying the bulb E^2 , a spring cord-winding mechanism mounted in the upper tube-section and carrying a cord attached to the sliding tube-section, a spring cord-winding mechanism mounted in the sliding part of the chandelier, having a cord attached to the stationary tube-section, and a locking mechanism carried by the sliding tube-section at its upper end and con-

cealed within the tube-sections, and arranged to permit the passage of the cord which is wound in the sliding tube-section.

2. The combination of the upper stationary
5 tube-section, the lower sliding tube-section, the devices which prevent the rotation of the lower tube-section relatively to the upper, a spring winding mechanism mounted in the upper tube-section and having a flexible connection with
10 the lower tube-section, a spring winding mechanism mounted in the lower tube-section, and having a flexible connection with the upper tube-section, and a locking mechanism carried
by the sliding tube-section and adapted to en-
15 gage with the stationary tube-section, shell E,

carried by the sliding tube-section, and a stem or lever projecting from the bottom for operating the stops, substantially as set forth.

3. In a chandelier, the combination, with the stationary section provided with the rack E, 20 and the sliding section provided with the toothed wheel H, of the locking-rod I, carrying the detent i, the levers K K, and the stem L', substantially as set forth.

In testimony whereof I affix my signature 25 in presence of two witnesses.

STEPHEN S. NEWTON.

Witnesses:

M. P. CALLAN,
H. H. BLISS.