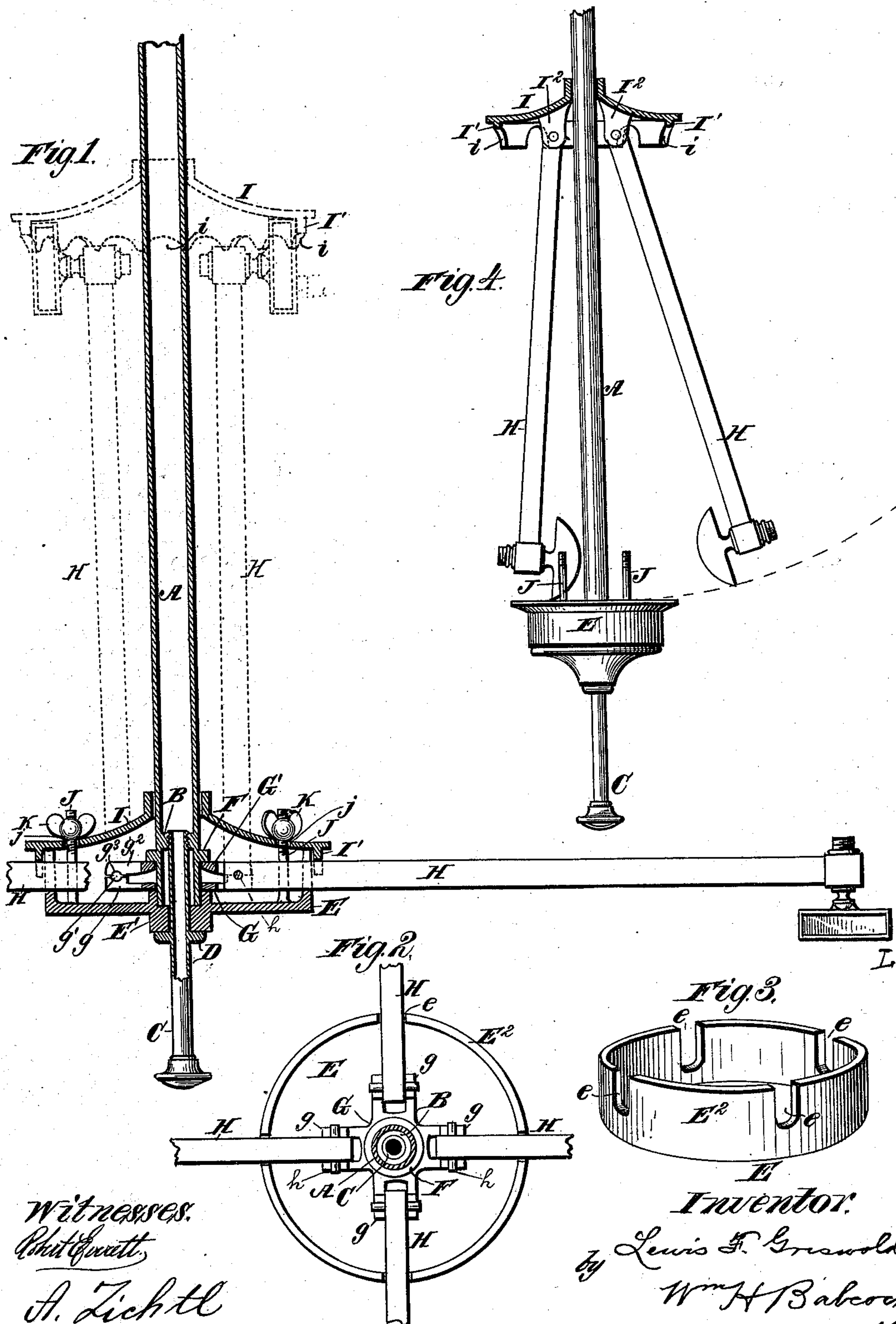


(No Model.)

L. F. GRISWOLD.
CHANDELIER.

No. 402,077.

Patented Apr. 23, 1889.



Witnesses:
Chas. G. Pratt,
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UNITED STATES PATENT OFFICE.

LEWIS F. GRISWOLD, OF MERIDEN, CONNECTICUT, ASSIGNOR TO THE
CHARLES PARKER COMPANY, OF SAME PLACE.

CHANDELIER.

SPECIFICATION forming part of Letters Patent No. 402,077, dated April 23, 1889.

Application filed September 13, 1888. Serial No. 285,287. (No model.)

To all whom it may concern:

Be it known that I, LEWIS F. GRISWOLD, a citizen of the United States, residing at Meriden, in the county of New Haven and State of Connecticut, 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.

The object of this invention is to provide chandeliers with folding arms for supporting the lights, and thereby avoid the necessity of attaching the arms when the chandelier is to be made ready for use and of removing them for storage or shipment or whenever the space which they occupy is needed.

In the accompanying drawings, Figure 1 represents a vertical section of a chandelier embodying my invention, the positions of the arms and clamping-cap when said arms are folded being shown in dotted lines. Fig. 2 represents a plan view of the box, the lower bearing-arms, and the lamp-supporting arms, the latter being partly broken away and the shaft being shown in horizontal section. Fig. 3 represents a perspective detail view of the box. Fig. 4 represents a modification in elevation.

A designates the tubular shaft of the chandelier, having a nut, B, fixed on its inside near its lower end, and a fixed collar, F, on the outside, nearly opposite. A hand-piece, C, for tightening and loosening the box and arm-holders, extends up into said tubular shaft from below, and is screw-threaded at its upper end to engage with nut B. This hand-piece is provided with an annular shoulder, D, which supports the box E, the latter being provided with a hub, E'. The lower end of this hub is in contact with shoulder D, and its upper end is in contact with the lower one of two arm-holders, G G', the upper arm-holder, G', being in contact with the fixed collar F. The lower holder, G, is provided with a pair of outwardly-extending bearing-arms, g, for each one of the lamp-supporting arms H. Each of these bearing-arms has a transverse bearing-groove, g', and each lamp-supporting arm H has on the

sides of its inner end a pair of trunnions, h, which fit in said grooves g' of the pair of bearing-arms g between which said inner end is placed. The upper arm-holder, G', is provided with arms g², corresponding to said arms g, and having downwardly-facing grooves g³, which, with grooves g', fit said trunnions, the upper arm-holder serving as a cap for the lower one. When the hand-piece C is turned home, the shoulder D forces the box E against the lower arm-holder, G, which in turn is thereby pressed against the upper arm-holder, G', the latter being held firmly by fixed collar F. The shoulder D and collar F clamp these parts E G G' tightly in position and prevent all risk of lamp-supporting arms H separating accidentally. These arms may be turned down, as shown in full lines, for use, or up out of the way, as shown in dotted lines, Fig. 1, without disturbing the holders or other devices above described at all.

When the arms H are turned down into horizontal position, they rest in recesses e of a raised peripheral flange, E², of box E. They are held thereto by a clamping-cap, I, which is free to move up and down on shaft A, and provided with an annular downwardly-extending flange, I', having recesses i corresponding in position to recesses e aforesaid. The flange I' is of slightly larger diameter than flange E², as shown, and fits outside of the latter, though it may fit inside instead. The arms H extend through the openings formed by these recesses e i, and are prevented from any lateral or other motion by the material of the box and cap. The latter is clamped to said box by any known and suitable clamping device. I prefer two or more screw-threaded rods, J, rising from the floor or base of box E through openings j of cap I, above which they receive thumb-nuts K. When the lamp-supporting arms H are to be folded for use, these nuts are turned off, the cap is slipped up along the shaft A a little above the position shown in dotted lines in Fig. 1, and after the arms are turned up it is slipped down into said position to hold them. Each arm H has a block, L, removably fastened to its outer (then its upper) end, in order that the said arms may be held in

vertical position, the flange I' being in contact with said blocks. The attachment of said blocks to the arms may be in each instance by a stem, *l*, extending from the block through a hole in the arm and screw-threaded to receive a nut, *l'*, on the other side of the latter.

When it is necessary to take the fixture to pieces for cleaning or repairs, the hand-piece C is unscrewed and the box and arm-holders are easily slipped off from the shaft A.

In the modification shown in Fig. 4 the arms H are hinged at one end to lugs I² on the under side of clamping-cap I and fold downward when said cap is raised. They are then held in position by the weight of the normally lamp-supporting ends and the contact of the blocks or stops attached thereto with the box E. In this modification the flange of the said box is slightly inclined upward and outward, but not provided with recesses in its periphery.

I am aware that it is not new to provide clothes-driers and similar devices with arms hinged to a central stand, which fold up against said stand out of the way when not in use. This I do not claim; but,

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a chandelier, a set of lamp-supporting arms, in combination with movable arm-supports between which they are held and pivoted, and clamping devices for holding said arm-supports together, substantially as set forth.

2. A pair of arm-supports and a box detachable therefrom, in combination with a tubular shaft having a fixed internal nut and a fixed external collar, lamp-supporting arms held between said arm-supports and resting on said box, and a hand-piece which enters said tubular shaft and engages said nut, said

hand-piece being provided with a shoulder which bears against said box to clamp said box and arm-supports between it and said collar, substantially as set forth.

3. A chandelier-shaft and a box mounted thereon, in combination with a cap vertically movable on said shaft, and clamping devices for holding said cap to said box at will, in order that said cap may be used to secure the lamp-supporting arms either in their horizontal or in their folded position, as set forth.

4. A set of lamp-supporting arms having pieces L attached to their outer ends, as described, in combination with shaft A, a cap, I, movable vertically on said shaft and adapted to fit over said pieces L, and attachments of said shaft to which said arms are pivoted, substantially as set forth.

5. A series of lamp-supporting arms, H, each having lateral gudgeons *h* near its inner end, in combination with a pair of arm-holders, G G', having arms *g g*² and grooves *g' g*³ to receive and hold said gudgeons, a box, E, having a raised flange on which said lamp-supporting arms rest, a shaft on which said box and arm-holders are sleeved, and a hand-piece which clamps them in position, for the purpose set forth.

6. A box, E, and cap I, having overlapping peripheral flanges and corresponding recesses, *e i*, in combination with lamp-supporting arms extending through the openings formed by said recesses, a main shaft, to an attachment of which the inner ends of said lamp-supporting arms are pivoted, and clamping devices for holding said cap to said box, substantially as set forth.

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

LEWIS F. GRISWOLD.

Witnesses:

W. H. LYON,
J. H. BECKETT.