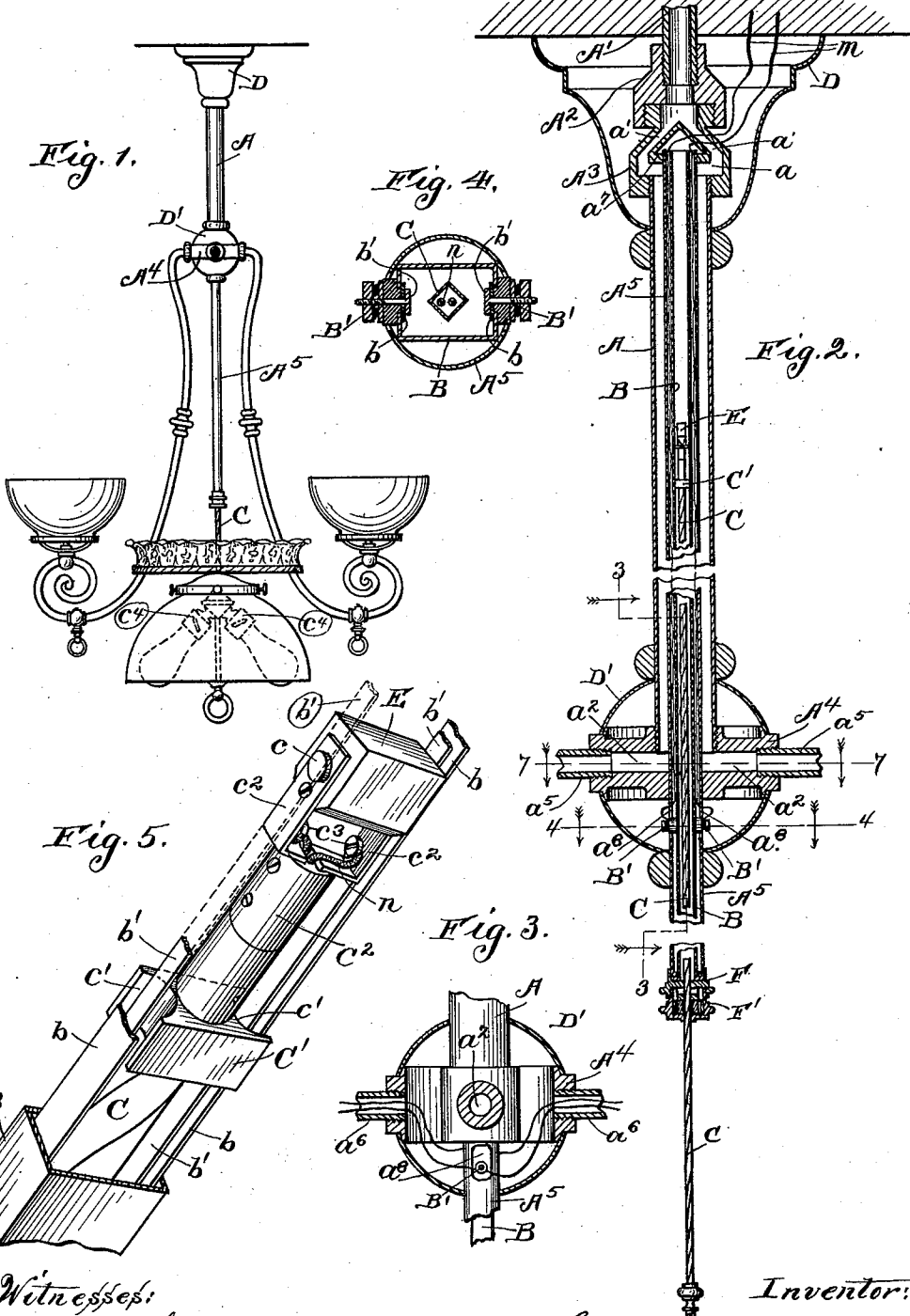


G. J. CARSON.
ELECTRIC SLIDE FOR CHANDELIERS.

No. 568,740.

Patented Oct. 6, 1896.



Witnesses:
R. J. Jacker,
O. A. Duggan.

Inventor:
George J. Carson.
By Chas. C. Tillman Atty.

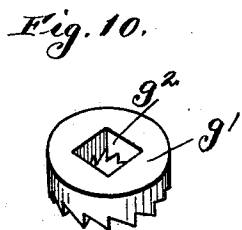
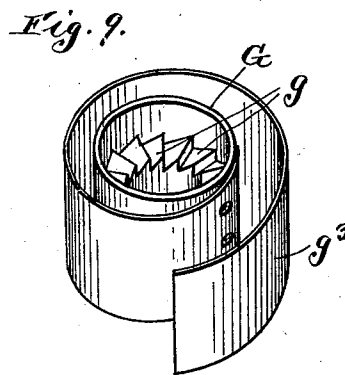
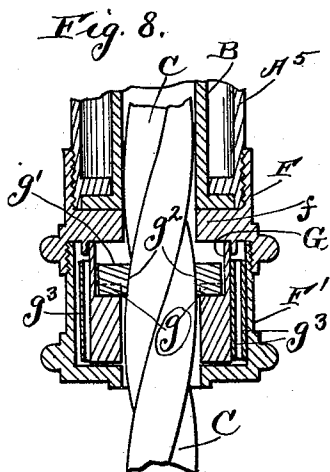
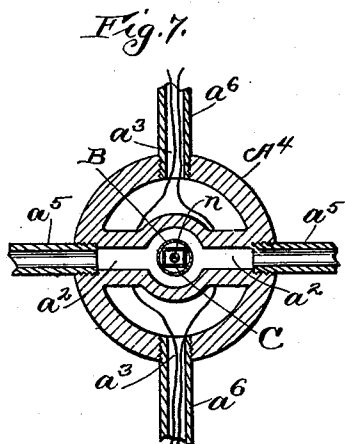
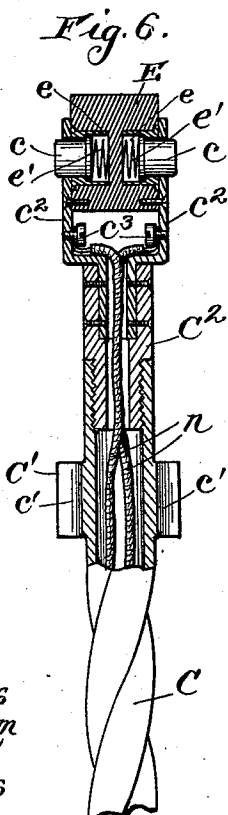
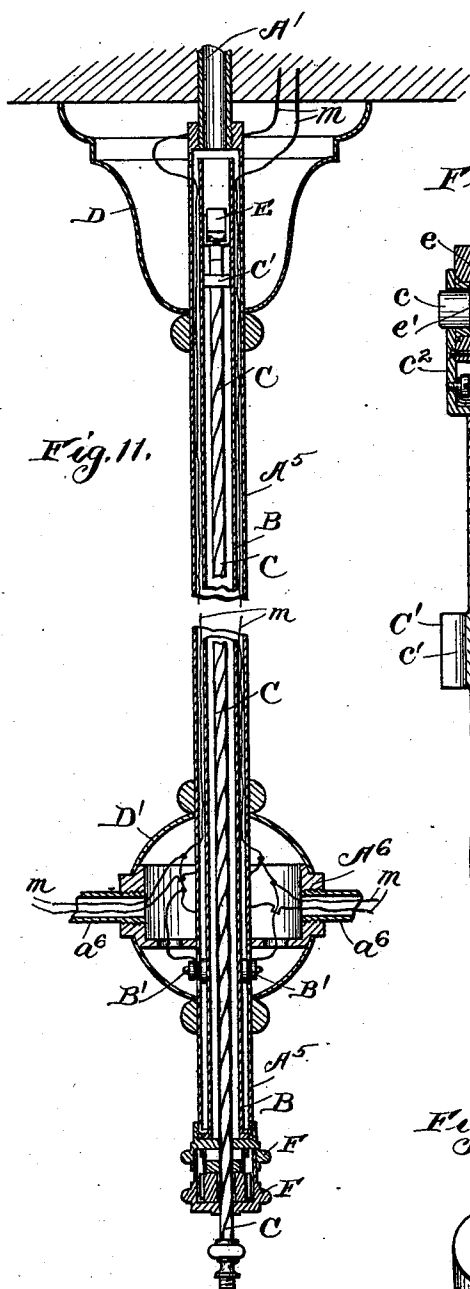
(No Model.)

2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

GEORGE J. CARSON, OF CHICAGO, ILLINOIS, ASSIGNOR TO HENRY G. WILLARD, OF SAME PLACE.

ELECTRIC SLIDE FOR CHANDELIERS.

SPECIFICATION forming part of Letters Patent No. 568,740, dated October 6, 1896.

Application filed October 23, 1895. Serial No. 566,574. (No model.)

To all whom it may concern:

Be it known that I, GEORGE J. CARSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Electric Slides for Chandeliers or Light-Fixtures, of which the following is a specification.

This invention relates to improvements in a slide for regulating the position of electric lights, such as are used in chandeliers or pendent fixtures; and it consists in certain peculiarities of the construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The objects of my invention are, first, to provide a slide for lowering or raising that portion of the fixture carrying the electric lights which shall be simple and inexpensive in construction, strong and durable, and effective in operation; second, such a slide which shall dispense with extraneous electric conductors, which are generally used on light-fixtures when the same are movable, and, third, an electric slide in which that portion of the fixture carrying the lights or incandescent sockets and globes may be adjusted to any suitable height without being extinguished and in such a manner as to prevent any possible danger or shock to the person or of the current becoming short-circuited and thereby injuring the fixture.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a view in side elevation of a combined gas and electric light chandelier embodying my invention. Fig. 2 is an enlarged vertical sectional view of a portion thereof, showing it foreshortened for the convenience of illustration. Fig. 3 is a sectional view, partly in elevation, taken on line 3 3 of Fig. 2, looking in the direction indicated by the arrows. Fig. 4 is a plan sectional view taken on line 4 4 of Fig. 2, as indicated by the arrows. Fig. 5 is a detail perspective view, enlarged, illustrating the construction of the slide and its guiding-tube. Fig. 6 is a verti-

cal sectional view of the upper portion of the slide, showing it detached from the fixture. Fig. 7 is a cross or plan sectional view taken on line 7 7 of Fig. 2. Fig. 8 is a vertical sectional view illustrating the construction of the clutching mechanism for the slide-rod. Fig. 9 is a perspective view in detail of the spring-actuated ratchet shell or collar of the clutching device. Fig. 10 is a similar view of another part of the clutching device; and Fig. 11 is a central vertical sectional view of a portion of the fixture, showing it modified in construction to accommodate electric lights only.

Similar letters refer to like parts throughout the different views of the drawings.

A represents a piece of pipe or tubing of any suitable shape and dimensions, which may be secured at its upper portion to the supply-pipe A^1 in the ordinary or any desired manner, but preferably by means of a coupling composed of the piece A^2 , which is formed with a screw-threaded opening to receive the supply-pipe and the piece A^3 , which is likewise formed with an opening provided in its lower part with screw-threads to engage the pipe A and with external screw-threads at its upper portion to engage the piece A^2 , as is clearly shown in Fig. 2 of the drawings. The chamber or opening a of the piece A is united to the upper portion of said piece by means of two channels a' for the passage of the gas from the supply-pipe into the pipe or tube A, on the lower portion of which is secured a suitable collar A^4 , provided with channels or ways a^2 a^3 for the reception of suitable tubular arms a^5 and a^6 for the gas and electric conductors, respectively. The piece A^3 is formed at the lower portion of the passages a' with an internal annular rim a^7 , into which is secured a piece of tubing or pipe A^5 , which passes through the collar A^4 and extends some distance below the same, as is shown in Figs. 1, 2, and 11 of the drawings, and is for the reception and retention of the inner tube B, which is preferably formed rectangular in cross-section, as shown, and is somewhat smaller than the tube A^5 to allow the electric conductors m to be placed therebetween, which conductors are shown in Fig. 2 of the drawings in elevation and passing in

front of the gas-channel a' and not through the same. On the lower end of the tube A^5 is secured a frictional clutching device to engage the slide-rod C, as will be presently explained.

The coupling connecting the tube or pipe A with the supply-pipe may be covered by means of a suitable ornamental piece D, and the collar A^4 may likewise be protected by means of a piece D' of any suitable design. The rectangular tube or pipe B is provided on the inner surface of two of its sides with insulating-strips b . On the inner surfaces of said insulating-pieces are placed and secured, longitudinally, metallic pieces b' , with which the spring-actuated contact pins or points c engage. Within the tube B is placed and operates a hollow sliding rod C, which has secured on its upper portion a guide-block C' , substantially rectangular in shape and of suitable size to fit snugly within the tube B, so as to prevent any wobbling or lateral movement of the rod C by which said block is carried.

As shown in Figs. 5 and 6 of the drawings, the block C' is located a short distance from the upper end of the rod C and is formed with recesses c' in its portions adjacent to the metallic or electric conducting-strips b' , so that the block will stride the same without contacting therewith. On the upper end of the rod C is secured a tubular insulating-piece C^2 , to which is fastened two metal straps c^2 , between the upper portion of which is secured a block E of any suitable insulating substance. The block E is formed in its sides adjacent to the metal strips b' , when placed within the tube B, with openings e , in which are nested springs e' , usually spiral, to actuate the contact points or pins c , which project slightly through the openings in the straps c^2 , as is clearly shown in Fig. 6 of the drawings, in which figure it will be seen that the strips c^2 are insulated by means of the piece C^2 from the rod C, through which passes the conductors n , which are secured at their upper parts by means of the binding-screws c^3 to the straps c^2 and may be connected at their lower ends to incandescent sockets c of the ordinary construction and in any desired manner.

As before stated, when using the combined electric-light and gas fixture, as shown in Figs. 1 and 2 of the drawings, the conductors m pass between the tubes B and A^5 and extend somewhat below the collar A^4 and are then passed outward through the tube A^5 , through suitable openings a^5 , and are connected with the metallic strips b' by means of suitable screw-pins and washers B' , which are insulated from the tubes B and A^5 , as is clearly shown in Fig. 4 of the drawings. On the lower end of the tube A^5 is secured a collar F, having its upper and lower portions provided with female screw-threads to receive the tube A^5 and the box-collar F' , respectively. The collar F is formed with an internal annular flange f , through which the

rod C passes. Within the box-collar F' , which is screwed to the collar F, as shown in Fig. 8, is located a tubular thimble G, provided on its inner surface with radial ratchet-teeth g to engage the toothed piece g' , which is formed with a square opening g^2 when a rectangular rod is used to pass therethrough.

To the outer surface of the thimble G is secured the band-spring g^3 , which is located within the box-collar F' and actuates the said thimble in the movement of the rod. The toothed piece g' lies normally in engagement with the teeth g of the thimble, but when the rod C, which is of a spiral yet rectangular form in cross-section, is moved upward the said piece will be disengaged from the teeth g , but as soon as the upward movement of the rod is stopped the piece g' will engage the teeth g and by reason of the spring g^3 will be caused to clutch the rod and prevent its free movement downward, yet will permit such movement when sufficient force is applied thereto.

In Fig. 11 of the drawings I have shown a modification in the construction of the fixture adapted for electric lights only in which the outer tube A is omitted, for the reason that no passage-way for the gas is required. In this modification the construction of the parts are substantially the same as above set forth, with the exception of the collar A^6 , which is provided with tubular arms a^6 for the reception of the conducting-wires m , which are used in each of the arms, instead of gas, and for this reason the passages a^2 are omitted from said collar.

From the foregoing and by reference to the drawings it will be seen and clearly understood that by inserting the block E and piece C' on the rod C into the tube B the points or pins c will contact with the metal or conducting strips b' , which are charged through the conductors m , and that the current will be carried through the conductors n to the incandescent lights at the lower end of the rod C and will continue with equal force in its upward or downward movement until the points c are brought below the lower ends of the strips b' , at which time the circuit will be broken and there will be no possibility of a shock to the person handling the fixture or of a short circuit being formed. It is also apparent that by the use of the guide-piece C' any lateral movement or wobbling of the rod C is prevented, which renders my slide reliable and effective.

While I have shown the rod C formed rectangular in cross-section and of a spiral shape and have illustrated the clutching device therefor, yet I do not desire to be limited to such a shaped rod or to the clutching device herein described, as I may employ other means for sustaining the rod in the desired position, yet allowing it to be drawn out.

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

1. The combination with a tubular fixture or chandelier, of a tube having on its inner surface electric conductors insulated from said tube but exposed interiorly, a hollow rod to operate in the tube, an insulated piece secured in the upper end of said rod, straps secured in said insulated piece, a block located between the straps and carrying spring-actuated contacts, electric connections with the contacts, and passing through the rod, and electric connections with the conductors in the tube, substantially as described.

2. The combination with a tubular fixture or chandelier, of a tube having on its inner surface electric conductors insulated from said tube but exposed inwardly, a hollow rod provided with a guide-block having recesses to stride said conductors, to operate in the tube, a block, carrying spring-actuated contacts, secured on one end of said rod, electric connections with the contacts and passing through the rod, and electric connections with the conductors, substantially as described.

3. The combination of a tubular fixture provided with passages for the illuminating fluids, with a tube having on its inner surface electric conductors insulated from said tube, but exposed interiorly, a hollow rod provided with a guide-block having recesses to stride said conductors, to operate in said tube, a block, carrying spring-actuated contacts secured on one end of the rod, electric connections with the contacts and passing through the rod, electric connections with the conductors in the tube, and means to sustain the slide-rod in the desired position, substantially as described.

4. The combination with a tube having on its inner surface electric conductors insulated from said rod but exposed interiorly, an electric connection with said conductors, a rod

movably located in the tube, a guide-block secured on the rod, a block, carrying spring-actuated contacts, secured on one end of the rod, and electric connections with the contacts and extending longitudinally with the rod, substantially as described.

5. The combination with a tube having on its inner surface electric conductors insulated from said rod, but exposed interiorly, an electric connection with said conductors, a rod movably located in the tube, a guide-block secured on the rod, a block, carrying spring-actuated contacts, secured on one end of the rod, electric connections with the contacts and extending longitudinally with the rod, and means to sustain the rod in the desired position, substantially as described.

6. The combination of the outer tube A, secured to the supply-pipe with the intermediate tube A⁵, closed at its upper end, located in said tube with a space therebetween, for the passage of gas, the tube B, within the tube A⁵, the insulating-strips *b*, and conducting-pieces *b'*, on the inner surface of the tube B, the conductors *m*, electrically connected to the pieces *b'*, the hollow rod C, in the tube B, the guide-block C', having the recesses *c'*, on said rod, the straps *c*², secured to the upper end of the rod and provided with the binding-screws *c*³, the block E, having the recesses *e*, the spring-actuated contacts *c*, in said recesses, the conductors *n*, passing through the rod C, and secured at one of their ends to the straps *c*², and at their other ends to the socket-piece for the light, all constructed, arranged and operating substantially as described.

GEORGE J. CARSON.

Witnesses:

CHAS. C. TILLMAN,
E. A. DUGGAN.