E. G. SMITH & F. J. MANTEL.

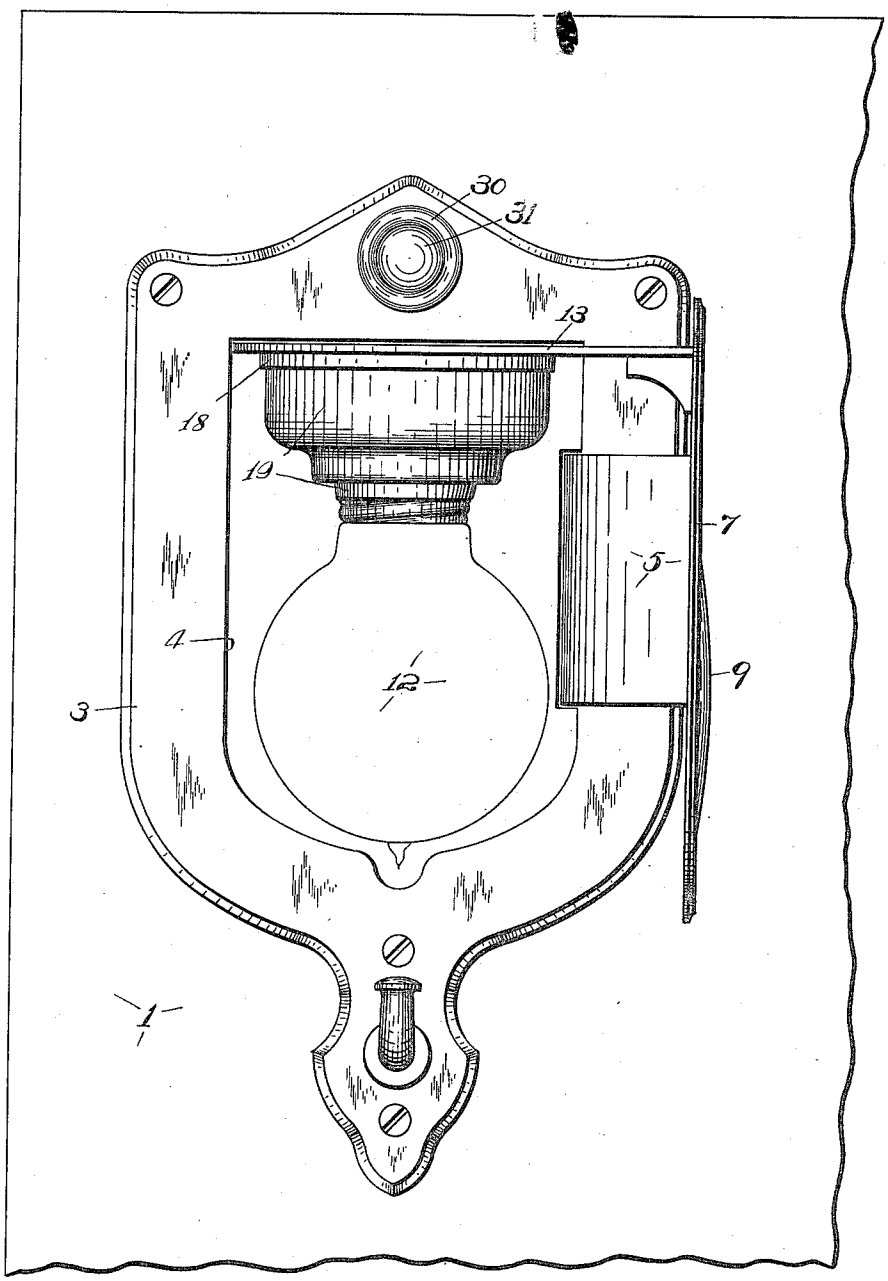
INCANDESCENT ELECTRIC LAMP FIXTURE.

APPLICATION FILED APR. 24, 1911.

1,156,560. Patented Oct. 12, 1915.

5 SHEETS—SHEET 1.

Fig. 1.



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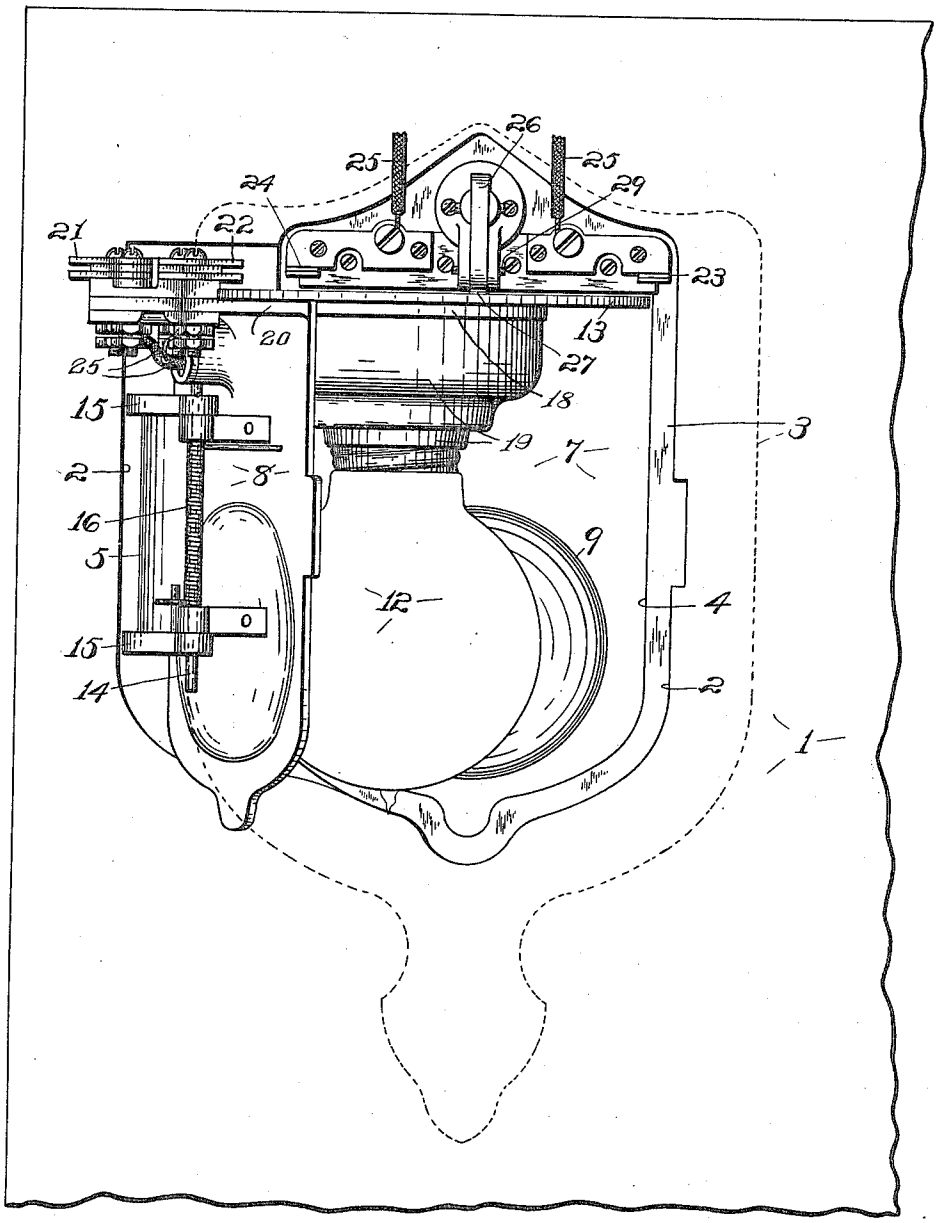
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5 SHEETS—SHEET 2.

Fig. 2.



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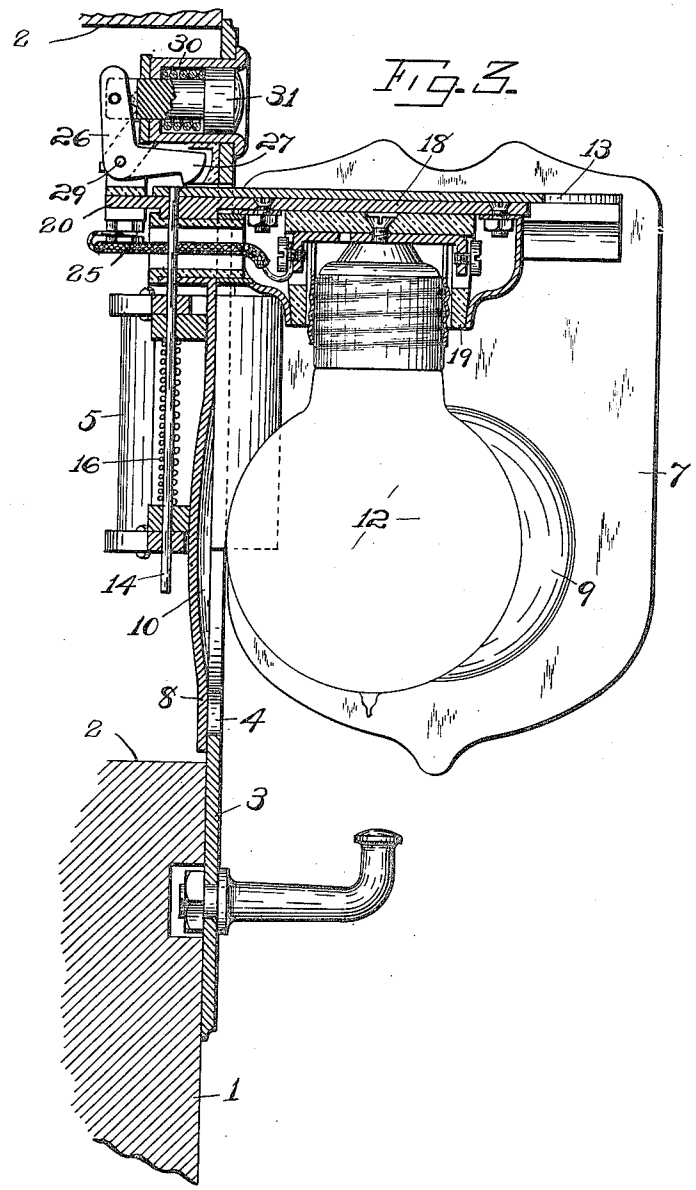
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5 SHEETS—SHEET 3.

FIG. 3.



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INCANDESCENT ELECTRIC LAMP FIXTURE.

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5 SHEETS—SHEET 4.

Fig. 4.

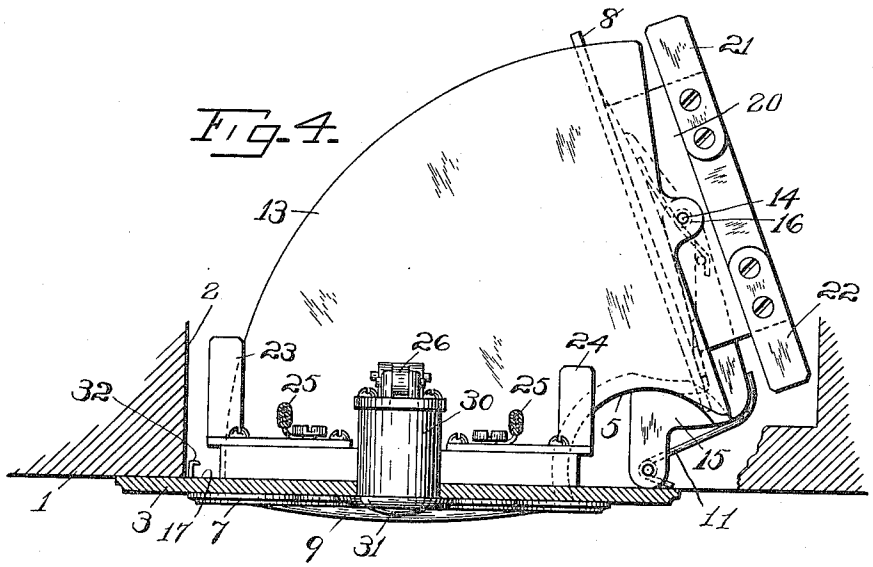
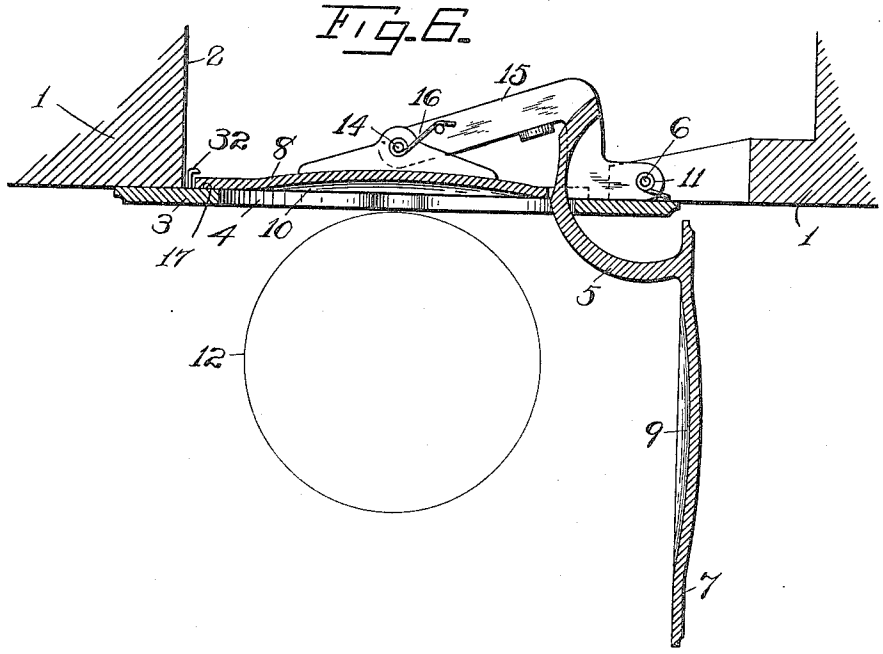


Fig. 6.



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5 SHEETS—SHEET 5.

Fig. 5.

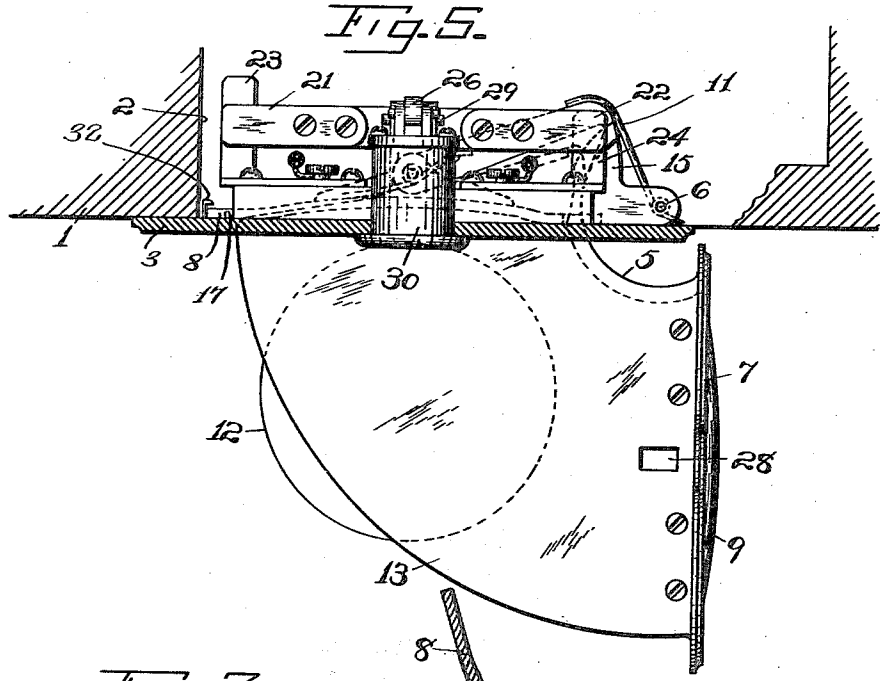
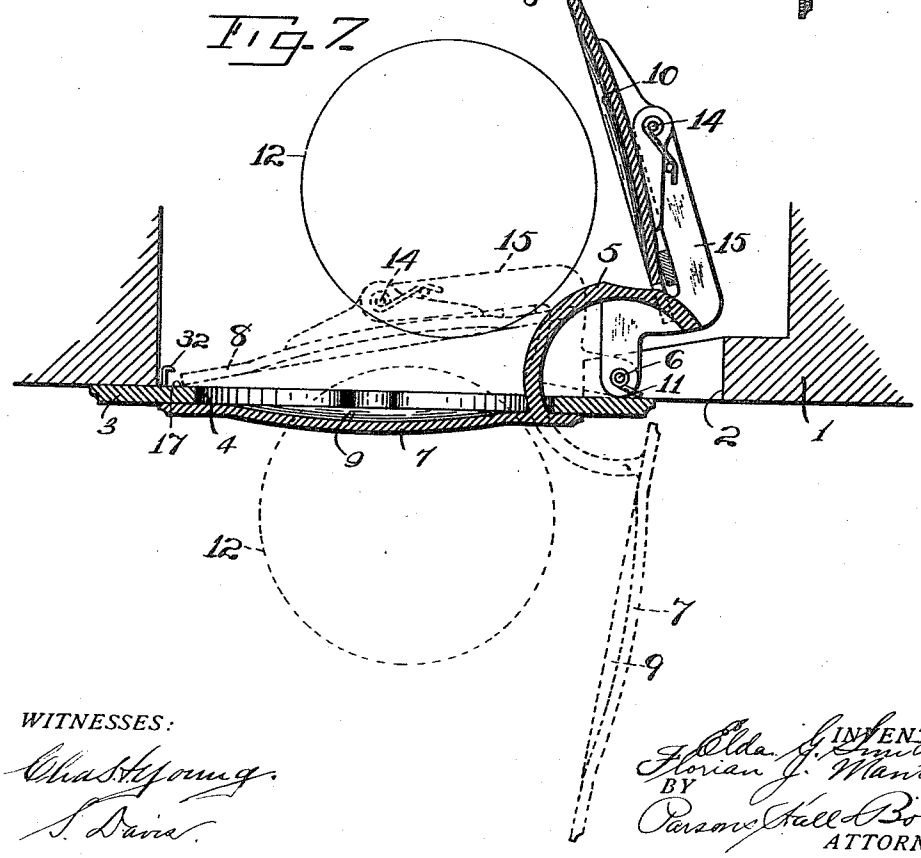


Fig. 7.



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UNITED STATES PATENT OFFICE.

ELDA G. SMITH AND FLORIAN J. MANTEL, OF SYRACUSE, NEW YORK, ASSIGNORS TO CROUSE-HINDS COMPANY, OF SYRACUSE, NEW YORK, A CORPORATION OF NEW YORK.

INCANDESCENT-ELECTRIC-LAMP FIXTURE.

1,156,560. Specification of Letters Patent. Patented Oct. 12, 1915.

Application filed April 24, 1911. Serial No. 622,899.

To all whom it may concern:

Be it known that we, ELDA G. SMITH and FLORIAN J. MANTEL, of Syracuse, in the county of Onondaga and State of New York, have invented a certain new and useful Incandescent-Electric-Lamp Fixture, of which the following is a specification.

Our invention has for its object the production of a fixture for supporting incandescent electric lamps arranged in a wall of a car or other structure, when not in use and movable out of said wall to be brought into service; and it consists in the combinations and constructions hereinafter set forth and claimed.

In describing this invention reference is had to the accompanying drawings in which like characters designate corresponding parts in all the views.

Figure 1 is a front elevation of this fixture when in operative or open position. Fig. 2 is a rear elevation thereof, the parts being shown as in their inoperative or closed position. Fig. 3 is a vertical sectional view of the parts shown in Fig. 1. Figs. 4 and 5 are plan views, partly in section, of parts shown respectively in Figs. 1 and 2. Figs. 6 and 7 are horizontal sectional views of the fixture, the same being shown as in its operative or open position, in Fig. 6, and in its inoperative or closed position in Fig. 7.

This fixture comprises, generally, a frame adapted to be hinged to a wall having an opening therein and to support and maintain an incandescent electric lamp in vertical position, the frame being movable about its axis for carrying the lamp from within the wall to the outside thereof.

Usually the fixture also includes wings or plates carried by the frame and arranged at an angle to each other and extending in a radial direction relatively to the axis of the frame, the wings or plates serving as reflectors for the lamp when the fixture is in operative or open position and also as doors for closing the opening in the wall when the frame is swung to either of its extreme positions, respectively.

1 is the wall having an opening 2 therein. 3 is the base plate of the fixture having an opening 4 registering with the opening 2 of the wall 1. The base plate supports the other parts of the fixture and obviously may be omitted, if desired, and the remaining parts of the fixture supported directly by the wall 1.

5 is the frame pivoted at 6 to the base plate 3 and comprising wings or plates 7 and 8 arranged in planes at an angle to each other, and also extending in substantially radial directions relatively to the axis 6 of the frame, the plates having concave reflecting portions 9, 10, respectively.

11 is a spring tending to swing the frame on its pivot 6 from its closed to its open position, that is from its position shown in Figs. 2, 4 and 7 toward that shown in Figs. 1, 5 and 6.

12 is an incandescent electric lamp suitably supported by the frame 5 as hereinafter described, and 13 is a top plate extending between the wings 7, 8 and being usually fixed relatively to the plate or wing 7.

The wing 8 is movably supported by the major part of the frame 5, and is here shown as pivoted at 14 between its side edges to arms 15 forming part of the frame 5, the axis of the pivot 14 preferably extending parallel to, and being spaced apart from, the axis 6 of the frame 5. A spring 16 normally tends to move the plate or wing 8 on its pivot 14 to advance the outer margin thereof (that is the margin farthest removed from the axis 6 of the frame 5) into the position shown in dotted lines, Fig. 7, so that the outer margin will engage suitable limiting means as the rear face of the plate 3, when the frame 5 is swung by the spring 11 into the position shown in Fig. 7. During further opening movement of the frame by hand the margin engages and fulcrums at 17 on the inner face of the wall or plate 3. Thus the wing or door 8 moves about two axes located at opposite sides of the opening 2.

The wing or plate 8 is provided with a forwardly extending bracket 18 at its upper end, such bracket being arranged close to the lower face of the top plate 13 and being provided with a depending socket 19 for supporting the lamp 12 with its axis parallel to, and in advance of, a straight line passing through the axes 6 and 17 of the bracket 5 and the door or plate 8 respectively. Said plate 8 also carries a suitable bracket 20 on its rear side upon which is carried a pair of contacts 21, 22 on opposite sides of the pivotal axis 14 of the door 8.

Said contacts 21, 22 are movable into engagement with contacts 23, 24 fixed relatively to the wall 1, and here shown as carried directly by the base plate 3. The contacts 23, 24 are connected in circuit with a suitable source of supply of electric energy and the contacts 21, 22 are connected by wires 25 respectively to the terminals of the socket 19.

During the swinging of the frame 5 outwardly by the spring 11 from the position shown in Figs. 2, 4 and 7 to that shown in Figs. 1, 3 and 5, the wing or plate 8 is tilted on its pivot 14 by its spring 16 until its outer margin is in advance of the inner margin, and engages the rear face of the base plate 3 in advance of the opposite margin of said plate, as indicated in Figs. 5 and 7. During such movement the contact 21 engages with its corresponding contact 23 while the other contact 22 is out of engagement with the contact 24. After the frame 5 has been swung by the spring 11 to the position shown in dotted lines Fig. 7, the frame is moved by hand by applying force to the wing or door 7, thereby causing the wing or door 8 to fulcrum at its outer margin on the plate 3 and also slide laterally until said plate 8 reaches the position shown in Figs. 3, 5 and 6, bringing the other contacts 22, 24 into engagement so that the lamp 12 is in a closed circuit and is located in front of the center of the plate 8.

The frame 5 is normally prevented from movement by the spring 11 by means of a spring-pressed catch 26 Fig. 3, having an engaging end 27 which enters a socket 28 in the upper face of the top plate 13, said catch consisting of an angular lever pivoted at its angle at 29 between lugs provided on a push button socket 30 which is carried by the base plate 3 and contains a suitable push button 31 operable for tilting the catch 26 on its pivot.

During the outward movement of the frame 5 the engaging end 27 of the catch bears on the upper face of the top plate 13.

To close the fixture, pressure is applied to the door 7 and during the initial movement of the frame 5, the outer margin of the door 8 is restrained from movement during the initial part of the closing movement of the frame, in order to move the door 8 relatively to the frame 5 and carry the lamp from the position shown in Fig. 5 to that occupied in Fig. 7, so that the lamp will not strike the plate 3. The door is restrained at its outer margin in any suitable manner and is here shown as held by a shoulder 32 opposed to the rear face of the plate 3 and usually having a shank which is rigid with the plate. As the frame 5 is swung outwardly the outer margin of the door 8 clears such shoulder and such margin does not pass under the shoulder until the frame is moved by hand to the limit of its outward movement causing the door 8 to slide laterally. However the shoulder 32 may be omitted and the spring 16 made strong enough to overcome the friction of the contacts 21 and 23. During the remainder of the closing movement of the frame 5, such frame and associated parts act as a unit.

This fixture is adapted for the berths of sleeping cars and is particularly advantageous in that the lamp and fixture are confined in minimum space and the lamp is always supported in vertical position so that the liability of injuring the filament thereof is reduced to a minimum. Furthermore, owing to the pivotal movement of the support for the lamp relatively to the frame a smaller wall opening is required than if a lamp support, rigid with the swinging frame, were employed.

What we claim is:—

1. An incandescent electric lamp fixture adapted to be supported by a wall having an opening, the fixture comprising a support for the lamp movable for carrying the lamp out of and into the opening, and having an additional movement for centering the lamp relatively to such opening, substantially as and for the purpose set forth.

2. An incandescent electric lamp fixture adapted to be supported by a wall having an opening, the fixture comprising a support for the lamp movable for carrying the lamp out of and into such opening, said support also having additional movement for centering the lamp relatively to such opening when the lamp is moved relatively to the opening, said support being arranged to move about axes located on opposite sides of the opening, and the lamp being carried in front of a straight line passing through such axes, substantially as and for the purpose described.

3. An incandescent electric lamp fixture adapted to be supported by a wall having an opening, the fixture comprising a frame movable about an axis and including a support for the lamp, said support being pivoted to the frame and extending in a radial direction relatively to the axis of the frame and being arranged with its pivotal axis parallel to and spaced apart from the axis of the frame, the support being normally arranged with its outer margin in advance of its inner margin, and means for engaging said outer margin when the frame approaches its open position and causing the support to fulcrum at such outer margin and effect pivotal movement of the support, substantially as and for the purpose specified.

4. An incandescent electric lamp fixture adapted to be supported by a wall having an opening, the fixture comprising a frame movable about a vertical axis and having

means for supporting the electric lamp with its axis parallel to the axis of the frame, said support being pivoted to the frame and arranged with its pivotal axis parallel to and spaced apart from the axes of the frame and the lamp, and having its outer margin normally arranged in advance of its inner, means for engaging said outer margin when the frame approaches its open position and causing the support to fulcrum at such outer margin and effect pivotal movement of the support about its fulcrum point, substantially as and for the purpose set forth.

5. An incandescent electric lamp fixture adapted to be supported by a wall having an opening, the fixture comprising a frame movable about an axis and including a support for the lamp, said support being pivoted to the frame and extending in a radial direction relatively to the axis of the frame and being arranged with its pivotal axis parallel to and spaced apart from the axis of the frame, the support being normally arranged with its outer margin in advance of its inner margin, means for engaging said outer margin when the frame approaches its open position and thereby causing the support to fulcrum at such outer margin, and effect pivotal movement of the support, when the frame approaches its open position, and means for restraining movement of the outer margin of the support during the initial part of the closing movement of the frame, substantially as and for the purpose described.

6. An incandescent electric lamp fixture adapted to be supported by a wall having an opening, the fixture comprising a frame movable about a vertical axis and having means for supporting the electric lamp with its axis parallel to the axis of the frame, said support being pivoted to the frame and arranged with its pivotal axis parallel to and spaced apart from the axes of the frame and the lamp, and having its outer margin normally arranged in advance of its inner, means for engaging the outer margin when the frame approaches its open position and thereby causing the support to fulcrum at such outer margin and effect pivotal movement of the support about the fulcrum point at such outer margin, and means for restraining movement of the outer margin of the support during the initial part of the closing movement of the frame, substantially as and for the purpose specified.

7. An incandescent electric lamp fixture adapted to be supported by a wall having an opening, the fixture comprising a support for an incandescent electric lamp, the support including a door for closing the opening when the fixture is in its open position, the door also serving as a reflector for the lamp, and the support being movable for carrying the lamp into and out of the opening and having an additional movement for centering the lamp relatively to said opening, substantially as and for the purpose set forth.

8. An incandescent electric lamp fixture adapted to be supported by a wall having an opening, the fixture comprising a frame movable about an axis and having a support for the lamp, the support comprising a door for closing such opening when the fixture is in open position and serving as a reflector for the lamp, the support being pivoted to the frame and extending in a radial direction relatively to the axis of the frame and being arranged with its axis parallel to, and spaced apart from, the axis of the frame, said support having its outer margin in advance of its inner margin, and means for engaging such outer margin when the frame approaches its open position, substantially as and for the purpose described.

9. An incandescent electric lamp fixture adapted to be supported by a wall having an opening, the fixture comprising a frame movable about an axis and including a support for the lamp, said support being pivoted to the frame and extending in a radial direction relatively to the axis of the frame, a spring for forcing one margin of the frame in advance of the other margin, and means for engaging the advance margin when the frame approaches its open position and thereby causing the support to fulcrum at such advance margin and effect pivotal movement of the support, substantially as and for the purpose specified.

10. An incandescent electric lamp fixture adapted to be supported by a wall having an opening, the fixture comprising a frame movable about an axis and having a support for an electric lamp, the support comprising a door for closing such opening when the fixture is in open position and serving as a reflector for the lamp, the support being pivoted to the frame and extending in a radial direction relatively to the axis of the frame, and said support being arranged with its axis parallel to, and spaced apart from, the axis of the frame and having its outer margin normally in advance of its inner margin, means for engaging such outer margin when the frame approaches its open position, a spring for holding the support in its normal position, and means for restraining movement of the support at its outer edge during the initial part of the closing movement of the frame, substantially as and for the purpose set forth.

11. An incandescent electric lamp fixture adapted to be supported by a wall having an opening, the fixture comprising a frame movable about an axis and including a support for the lamp, said support being pivoted to the frame and extending in a radial direction relatively to the axis of the frame and being arranged with its pivotal axis

parallel to, and spaced apart from, the axis of the frame, the spring acting on the support for holding the outer margin of such support in advance of the inner margin, and means for engaging said margin when the frame approaches its open position and thereby causing the support to fulcrum at such outer margin and effect pivotal movement of the support, substantially as and for the purpose described.

12. An incandescent electric lamp fixture adapted to be supported by a wall having an opening, the fixture comprising a frame movable about an axis and including a support for the lamp, said support being pivoted to the frame and extending in a radial direction relatively to the axis of the frame, and being arranged with its pivotal axis parallel to, and spaced apart from, the axis of the frame, a spring for moving the support on its pivot to normally hold the outer margin of the support in advance of the inner margin thereof, means for engaging said outer margin when the frame approaches its open position and thereby causing the support to fulcrum at such outer margin and effect pivotal movement of the support, when the frame approaches its open position, and means for restraining movement of the outer margin of the support during the initial part of the closing movement of the frame, substantially as and for the purpose specified.

13. An incandescent electric lamp fixture adapted to be supported by a wall having an opening, the fixture comprising a frame movable about a vertical axis and having doors arranged at an angle to each other, one of the doors serving as a support for the lamp, and being pivoted to the frame and extending in a radial direction relatively to the axis of the frame, the pivoted door being arranged with its axis parallel to and spaced apart from the axis of the frame, a spring tending to move the pivoted door on its pivot to arrange its outer margin in advance of the inner margin thereof, means for engaging said outer margin when the frame approaches its open position, and means for restraining the movement of the pivoted door during the initial part of the closing movement of the frame, substantially as and for the purpose set forth.

14. An incandescent electric lamp fixture adapted to be supported by a wall having an opening therein, and fixed contacts associated therewith, the fixture comprising a support movable for carrying the lamp out of and into the opening, and having additional movement for centering the lamp relatively to such opening, and contacts carried by the support for coacting with the contacts fixed relatively to the supporting wall, substantially as and for the purpose described.

15. An incandescent electric lamp fixture adapted to be supported by a wall having an opening therein, and fixed contacts associated therewith, the fixture comprising a support movable for carrying the lamp into and out of the opening, and having pivotal movement for centering the lamp relatively to such opening, and contacts carried by the support on opposite sides of its pivotal axis for coacting with the first-mentioned contacts, substantially as and for the purpose described.

16. An incandescent electric lamp fixture adapted to be supported by a wall having an opening therein, and a pair of contacts fixed relatively thereto, the fixture comprising a support for the lamp movable for carrying the lamp out of and into such opening, said support having additional movement for centering the lamp relatively to said opening when the lamp is being moved relatively to the opening, and said support being arranged to move about axes located on opposite sides of the opening, the lamp being carried in front of a straight line passing through such axes, and contacts carried by the support and movable into and out of engagement with the first-mentioned contacts, substantially as and for the purpose specified.

17. An incandescent electric lamp fixture adapted to be supported by a wall having an opening therein, and a pair of contacts fixed relatively thereto, the fixture comprising a frame movable about an axis and including a support for the lamp, said support being pivoted to the frame and extending in a radial direction relatively to the axis of the frame and being arranged with its pivotal axis parallel to, and spaced apart from, the axis of the frame, a spring tending to move the support on its pivot, and hold the outer margin thereof in advance of the inner margin thereof, means for engaging said outer margin when the frame approaches its open position and thereby causing the support to fulcrum at such outer margin and effect the pivotal movement of the support, and contacts carried by the support on opposite sides of the pivotal axis thereof, and being movable into and out of engagement with the first-mentioned contacts, substantially as and for the purpose set forth.

18. An incandescent electric lamp fixture adapted to be supported by a wall having an opening therein, and a pair of contacts fixed relatively thereto, the fixture comprising a frame movable about an axis and having means for supporting a depending incandescent electric lamp with its axis parallel to the axis of the frame, and the frame being movable about its axis for carrying the lamp out of and into the opening, and including wings extending in a radial direc-

tion relatively to the axis of the frame and serving as reflectors for the lamp and as doors for closing the opening when the frame is in either of its extreme positions, the wing at the rear side of the opening being connected to the major part of the frame by a pivot extending parallel to and spaced apart from the axis of the frame, a spring tending to move the pivoted wing about its axis in one direction, and contacts supported by said wing on opposite sides of the pivot thereof and being movable into and out of engagement with the first-mentioned contacts, substantially as and for the purpose described.

19. An incandescent electric lamp fixture adapted to be supported by a wall having an opening therein, and a pair of contacts fixed relatively thereto, the fixture comprising a frame movable about a vertical axis and having means for supporting a depending electric lamp with its axis parallel to the axis of the frame, and the frame being movable about its axis for carrying the lamp out of and into the opening and including wings extending in a radial direction relatively to the axis of the frame and serving as reflectors for the lamp and as doors for closing the opening when the frame is in either of its extreme positions, and a top plate extending between said wings, the wing at the rear side of the opening being connected to the major part of the frame by a pivot extending parallel to and spaced apart from the axis of the frame, and the lamp being carried by the pivoted wing, a spring tending to move the pivoted wing about its axis in one direction, contacts supported by said wing on opposite sides of the pivot thereof and being movable into and out of engagement with the first-mentioned contacts, and means tending to restrain the outer margin of the wing during the initial part of the closing movement of the frame, substantially as and for the purpose specified.

In testimony whereof, we have hereunto signed our names in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 30th day of March 1911.

ELDA G. SMITH.
FLORIAN J. MANTEL.

Witnesses:
WM. CORNELL BLANDING,
C. C. SCHOENECK.