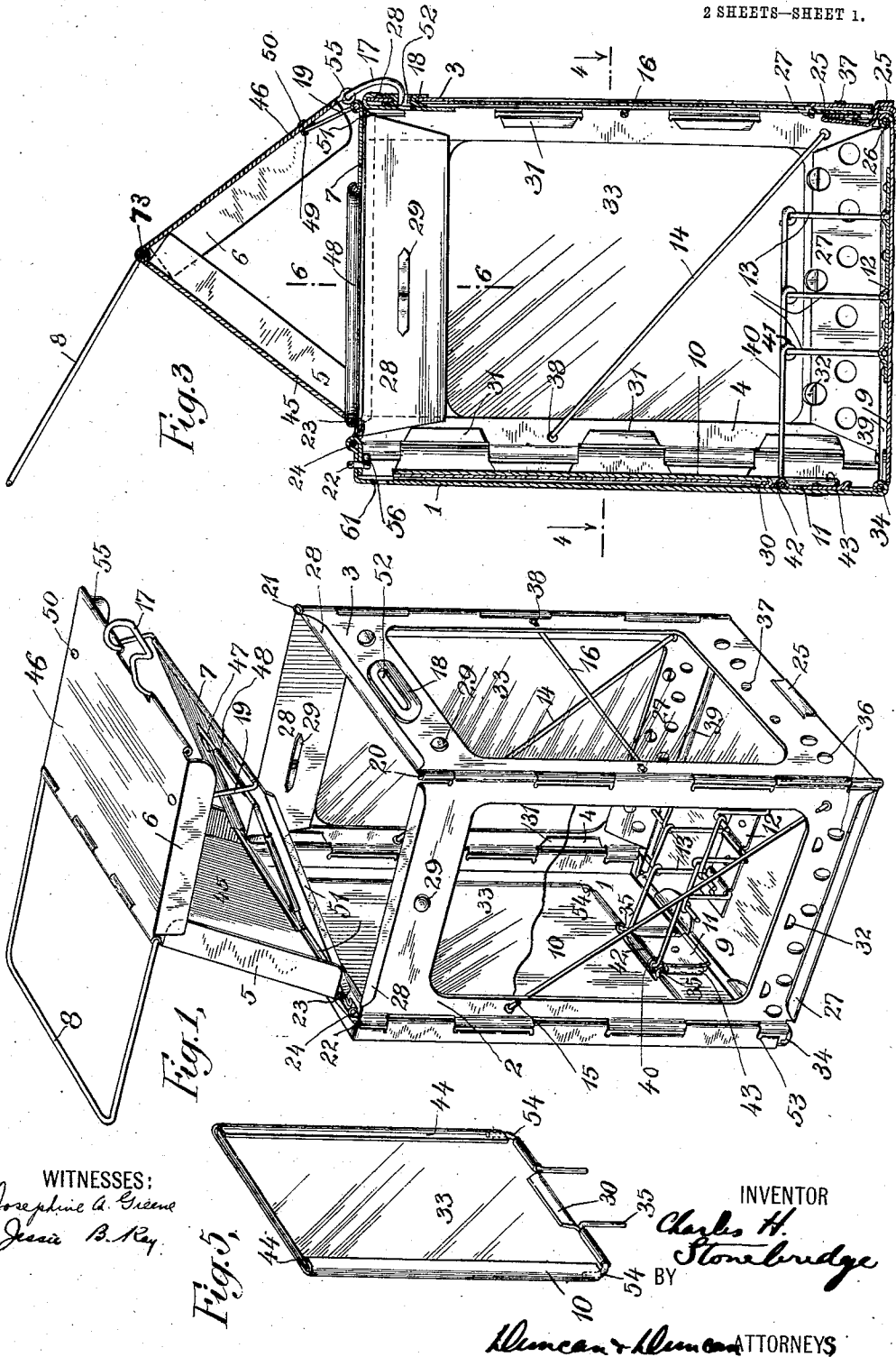


C. H. STONEBRIDGE.
FOLDING LANTERN.
APPLICATION FILED DEC. 11, 1907.

2 SHEETS—SHEET 1.



WITNESSES:
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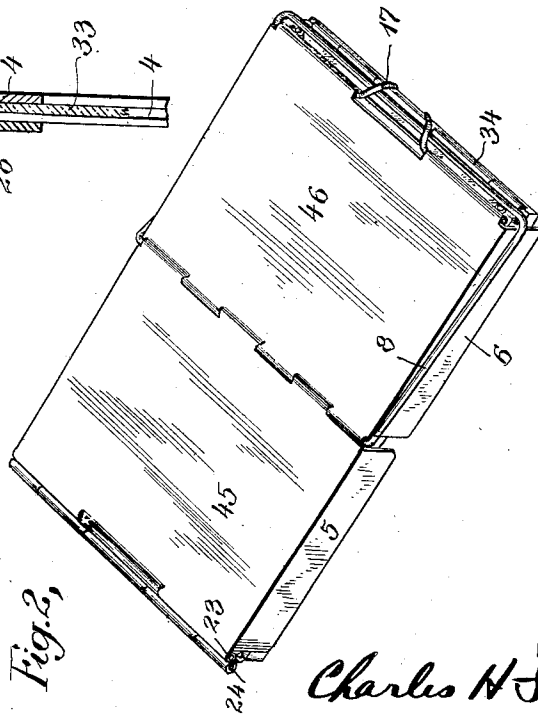
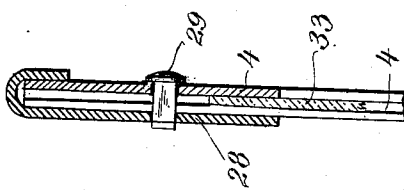
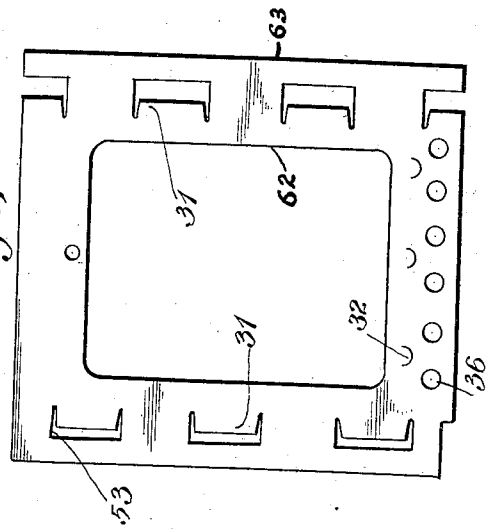
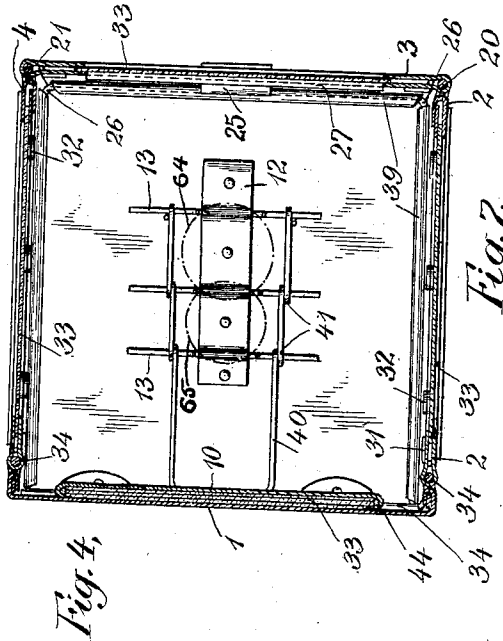
Hancock & Hancock ATTORNEYS

No. 890,193.

PATENTED JUNE 9, 1908.

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2 SHEETS—SHEET 2.



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Fig. 5,

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UNITED STATES PATENT OFFICE.

CHARLES H. STONEBRIDGE, OF NEW YORK, N. Y.

FOLDING LANTERN.

No. 890,193.

Specification of Letters Patent.

Patented June 9, 1908.

Application filed December 11, 1907. Serial No. 405,986.

To all whom it may concern:

Be it known that I, CHARLES H. STONEBRIDGE, a citizen of the United States, and resident of the city, county, and State of New York, have made certain new and useful Inventions Relating to Folding Lanterns, of which the following is a specification, taken in connection with the accompanying drawings, forming part of the same.

This invention relates to folding lanterns of the type disclosed in my prior United States patents 662,474, November 27, 1900, 740,377, September 29, 1903, 760,660, May 24, 1904, 785,772, March 28, 1905, and 836,411 and 836,412, November 20, 1906.

In the accompanying drawings showing an illustrative embodiment of this invention, and in which the same reference numerals refer to similar parts in the several figures, Figure 1 is a perspective view showing the lantern open. Fig. 2 is a perspective view showing the lantern folded into closed position. Fig. 3 is a vertical side section of the lantern when in operative position. Fig. 4 is a horizontal sectional view taken substantially along the line 4-4 of Fig. 3. Fig. 5 is a detail perspective view showing the reflector. Fig. 6 is an enlarged detail of the side construction. Fig. 7 shows a side blank.

In the illustrative embodiment of this invention shown in the drawings, the back 1 is hinged to the sides 2 and 4, to both of which the narrower front 3 is also hinged. These parts may be constructed of any desired material, such as sheet brass, aluminum, etc., the parts being so shaped that they are greatly reinforced so that extreme lightness can be combined with sufficient strength to withstand even rough usage. The back 1 may have secured to it the main pintle member 34 which if desired may extend entirely around this back member, serving as a pintle for the bottom 9 and then passing through the flanged hinge pieces on the sides of the back so as to serve as a pintle for the sides 2 and 4. The ends 22 of this main pintle member which may be in the form of a steel wire, may be carried across the top flange of the back and down through an aperture therein, their extremities 56 being securely locked in place under this flange, as indicated in Fig. 3.

The sides and front may be similarly formed and are preferably constructed from blanks similar to what is shown in Fig. 7, these blanks being first punched out of sheet

metal, and then the hinges formed by bending over the edge portions of the blanks around a suitable pin or mandrel and bringing them forcibly down upon a thin templet of sheet steel or other material so that the lateral edges 63 of the blank are brought substantially into line with the edges of the pane aperture 62 in the member. When this has been done the hinge tongues 31 are bent over as indicated in Figs. 1 and 3, and securely lock the parts together in proper position, leaving the two thicknesses of metal separated sufficiently to accommodate the pane of mica or other material which is subsequently slipped therein. The lower cap-plate 27 is put in place so that the flange at its lower edge encircles the lower edge of the side in the same manner that the upper cap-plate 28 does, see Fig. 6. The locking tongues 32 on the side member and the cap are then forced inward and riveted down in the position indicated in Fig. 3 so that the cap and side member are held firmly in proper relative position, the air holes 36 in the member and cap being thereby held in proper alinement.

After the pane 33 of mica or other suitable material has been slipped into the side member 4, as indicated in Fig. 6, the cap 28 may be slipped into position and the fastener 29, which may be a brass split pin, is put in place and its ends bent down in the position shown in Fig. 3, so that the cap is held in place and the pane 33 held in proper position in the side by the hinge tongues, locking tongues and the fastener, which positively prevent its edgewise movement. Each of the sides is preferably provided with a guide stay 14 of wire or other suitable material firmly secured just inside the pane 33 so as to protect the same and also guide the bottom as it is swung upward. This may, of course, be readily done by securing the stay wire to the side member as by riveting over its ends 15. Other similar stays may be used to support the transparent pane, if desired, and arranged across it in any desired position, the front stay 16 being indicated as horizontally arranged across the front member 3.

The two sides may be hinged to the front 3 by the pintles 20, 21, which, of course, may be frictionally engaged by the double hinge members through which they pass, so that they may be readily withdrawn for cleaning

or other purposes. The front may be formed with a fastening slot 52 extending through the upper part of the member itself adjacent its upper portion, and this slot may, of course, be suitably reinforced as by the use of a metallic liner 18 flanged down so as to give added strength without materially increasing the thickness of the front member at this point. The top 7 is shown as provided with a suitable up-turned flange 48 which may be formed by flanging up the metal around the guard pintle 23, the ends of which may be extended for this purpose around the smoke aperture in the top. The guard is indicated as being formed of the two hinged guard members 45, 46, each provided with the lateral flanges 5, 6 inclosing the sides of the parts when folded and to prevent the extinguishment of the light. The member 45 is hinged about the pintle 23 and is also hinged at its upper edge about the hinge wire 73 which may be conveniently provided by extending the ends of the handle 8 inward until they substantially meet. The guard member 46 may as indicated be connected to the top 7 by the guard link 19 which passes through a hinge along the front edge of the top and has its end pivotally seated in the link clips 49 which may be secured to the guard member 46 by suitable rivets 50. The front edge 55 of this guard member may be formed to inclose the ends of the fastening 17 which in this manner is pivotally secured to the guard member, this fastening preferably formed of resilient material, such as spring wire, is adapted to engage the fastening slot 52 in the front and strongly hold the parts of the lantern in operative position, as is indicated in Fig. 3. This fastening when the lantern is folded into closed position, as is shown in Fig. 2, can pass around the handle 8 and under the adjacent edge of the back so as to firmly hold the entire lantern in closed position.

The bottom 9 as stated may be hinged at its rear edge about the main pintle member 34 which passes around the back and strongly reinforces the same. The bottom may also be reinforced by running the edge wire 26 around its three free sides and inclosing this wire in the upturned edge 39 of the bottom. When the bottom is brought down into operative position, as shown in Fig. 3, it may snap past the spring lock 25 which may be riveted in position to the front member by suitable rivets 37. As indicated in Fig. 3, this lock firmly holds the bottom in proper position and prevents it being raised until the lock has been manually moved so as to be withdrawn from the path of the front edge of the bottom.

Any desired candle-holding means may be used and a suitable candle-holder may be provided by hinging resilient candle-holder members 13 to the bottom. By forming

these members of substantially U-shaped resilient wire or similar material, they may be hinged to the bottom by passing their middle portions under the holder hinge strip 12 riveted to the bottom. By pivoting their outwardly turned upper ends within the loops 41 formed in the connector members 40 which have their connected portion pivoted in the socket 42 in the connector hinge strip 11 on the back, the candle-holder members 13 may be automatically swung into operative position as the bottom is moved down into place. As indicated, these holder members may be spaced apart at varying distances and similarly spaced apart at their upper and lower ends so as to be maintained in parallel position as they move during adjustment. In this way candles of different size may be readily accommodated and securely held in position, the larger candle being forced between the same widely spaced resilient members so as to be properly held, as shown in Fig. 4, while the other two candle-holder members 13 are spaced to accommodate a smaller candle 65.

If desired, the back member 1 may be formed with a suitable hanger hole 61 near its upper edge so that the lantern may be conveniently hung on a nail and firmly supported against the adjacent wall which is engaged by the back. If desired also, a suitable reflector and pane holder 10 indicated in Fig. 1, may be secured to the back. This reflector, as indicated in Fig. 5, may be formed with inturned edge flanges 44 and with a similarly inturned flange 30 at the bottom so as to form a pocket into which the spare lantern panes 33 of mica or other material may be slipped. Suitable reflector supports 35 may be secured to the reflector by bending around portions of the lower edge of the reflector to engage them, the ends 54 of these supports which are preferably of resilient material, being bent upward under the flanges, 44, as indicated in Fig. 5. These supports may be slipped into the parallel sockets 43 on either side of the connector hinge strip 11 secured to the back and in this way yieldingly hold the reflector 10 in position, the resilient supports normally holding it close against the back member, while, of course, it may be readily swung out against the force of these spring supports.

When the lantern is in the operative position indicated in Fig. 3, the fastening 17 may be disengaged from its slot 52 and the guard swung upward and its hinge members swung into substantially the same plane as the top 7. Then by withdrawing the lock 25, the bottom, after the candle has been withdrawn from the holder, can be swung upward, the guide stays 14 properly guiding it during its upward movement and preventing any injury to the fragile transparent pane in the sides. When the bottom has

been brought up into engagement with the back either side, such as 2 may be swung around against the adjacent face of the bottom and thereby the front 3 and side 4 are brought into engagement therewith so that the top and guard members 45, 46 may be folded down upon the parts and the entire lantern securely held when folded into the closed position indicated in Fig. 2 by swinging the fastening 17 under the bottom, this folding action being substantially the same as described in my former patents referred to.

Having described this invention in connection with an illustrative embodiment thereof, to the details of which disclosure the invention is not of course to be limited, what is claimed as new and what is desired to be secured by Letters Patent is set forth in the appended claims.

1. The folding lantern comprising a back having edge flanges, a main pintle extending substantially around said back and having its ends secured thereto to strengthen said flanges, sides hinged to said main pintle, a front hinged to said sides by removable pintles, said front and each of said sides being a member formed from sheet metal and having lateral edge portions folded back to form hinges and secured in position by integral hinge tongues and having a cap provided with an edge flange engaging the top of said member and held thereto by fasteners passing through said member and said cap, a pane held within said member by said fasteners and said tongues, and stays secured to said members and extending across the same in substantial contact with said panes, a bottom hinged to said back and engaging the stays secured to said sides during its folding movement and a plurality of differently spaced resilient candle holders hinged to said bottom and having their ends hinged to a connector mounted in said back.

2. The folding lantern comprising a back, a bottom and sides hinged to said back and a front hinged to said sides, said sides having panes, and guide stays mounted diagonally in said sides in substantial contact with said panes to guide said bottom as it is folded inward against said back.

3. The folding lantern comprising a supporting member, movable members hinged to the lateral edges of said supporting member and a folding member hinged to said supporting member to move between said movable members as it is folded, a pane in one of said movable members and a guide on the inner face of said movable member adjacent said pane to guide said folding member as it moves past said movable member.

4. The folding lantern comprising a back, a bottom hinged to said back, a plurality of resilient candle holder members hinged to said bottom and spaced apart at varying dis-

tances and a connector hinged to said back and to said candle holder members to maintain them in substantially parallel position.

5. The folding lantern comprising a back, a bottom hinged to said back and a plurality of holding members pivoted to said bottom and spaced apart to accommodate articles of different size between the adjacent holding members and a connector pivoted to said back and said holding members.

6. The folding lantern comprising a back, a bottom hinged to said back, a plurality of holding members movably mounted on said bottom and spaced apart to accommodate articles of different size between the adjacent holding members and means to automatically fold said holding members into substantial engagement with said bottom as said bottom is folded toward said back.

7. The folding lantern comprising a back, a reflector removably mounted on said back, said reflector comprising lateral flanges adapted to carry lantern panes.

8. The folding lantern comprising a back, a reflector resiliently mounted on said back, and means on said reflector to removably support lantern panes behind the same.

9. The container member formed of sheet metal having hinge apertures formed therein and having locking tongues projecting into said hinge apertures, the edge portion of said member being folded inward and secured in position by folding said locking tongues around the same.

10. The lantern member formed with a pane aperture and with laterally arranged hinge apertures provided with locking tongues projecting into the same, the lateral edges of said member being folded into substantial alinement with the lateral edges of said pane aperture and held in position by bringing said locking tongues into engagement therewith.

11. The sheet metal lantern member formed with a pane aperture and with hinge apertures adjacent one side of the same, there being locking tongues projecting into said hinge apertures, the edge of said member being folded into substantial alinement with the adjacent edge of said pane aperture and held in position by folding said locking tongues into contact therewith.

12. The sheet metal lantern member provided with a pane aperture, hinge apertures formed on the lateral edges of said member and locking tongues projecting into said hinge apertures, the lateral edges of said member being folded and brought into substantial alinement with the adjacent edges of said pane aperture and held in position by folding said locking tongues into engagement therewith, a pane located between said member and the folded edges thereof, caps having flanges engaging the ends of said member and fasteners passing through said member

and said caps to hold them in position and maintain said pane in proper position with relation thereto.

13. The sheet metal lantern member having an aperture and retaining means adjacent the lateral edges of said aperture to hold a pane, a cap having a flange to engage an

end of said member and a fastener passing through said cap and member and holding said pane in position.

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Witnesses:

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JESSIE B. KAY.