C. H. STONEBRIDGE.

FOLDING LANTERN.

APPLICATION FILED JUNE 7, 1918.

1,298,116.

Patented Mar. 25, 1919.

3 SHEETS—SHEET 1.

Fig. 1.

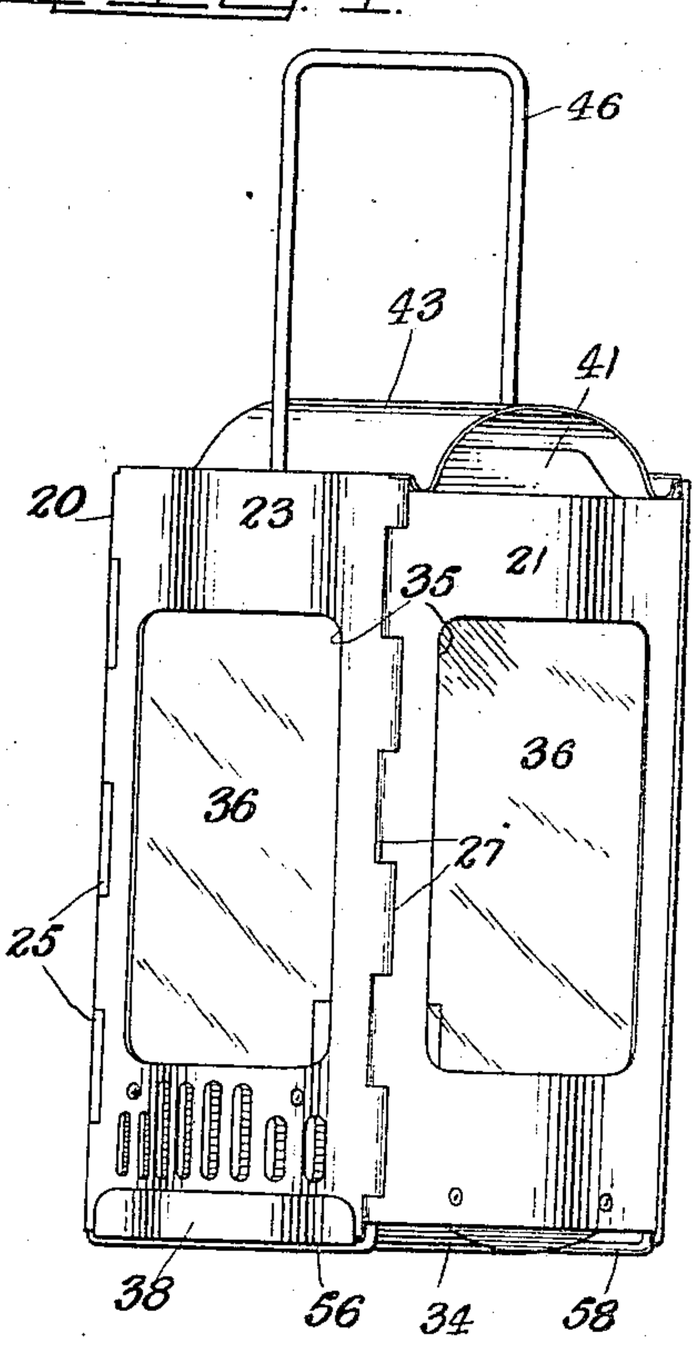


Fig. 2.

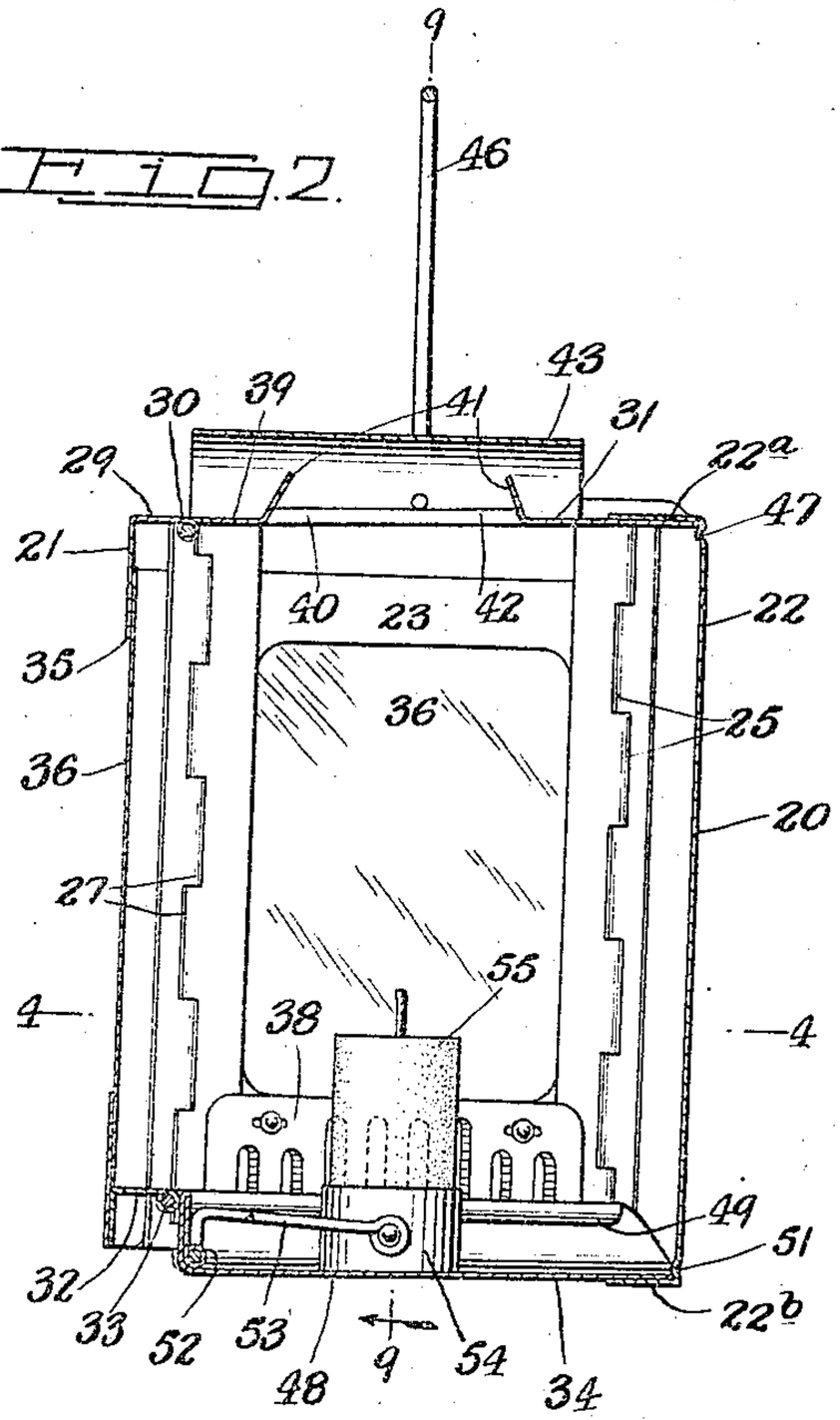


Fig. 3.

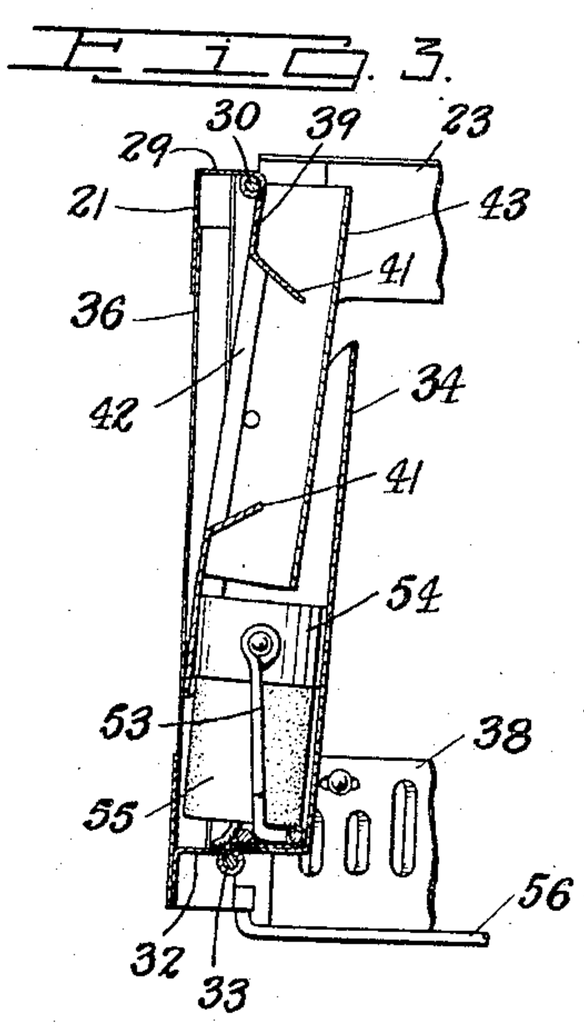
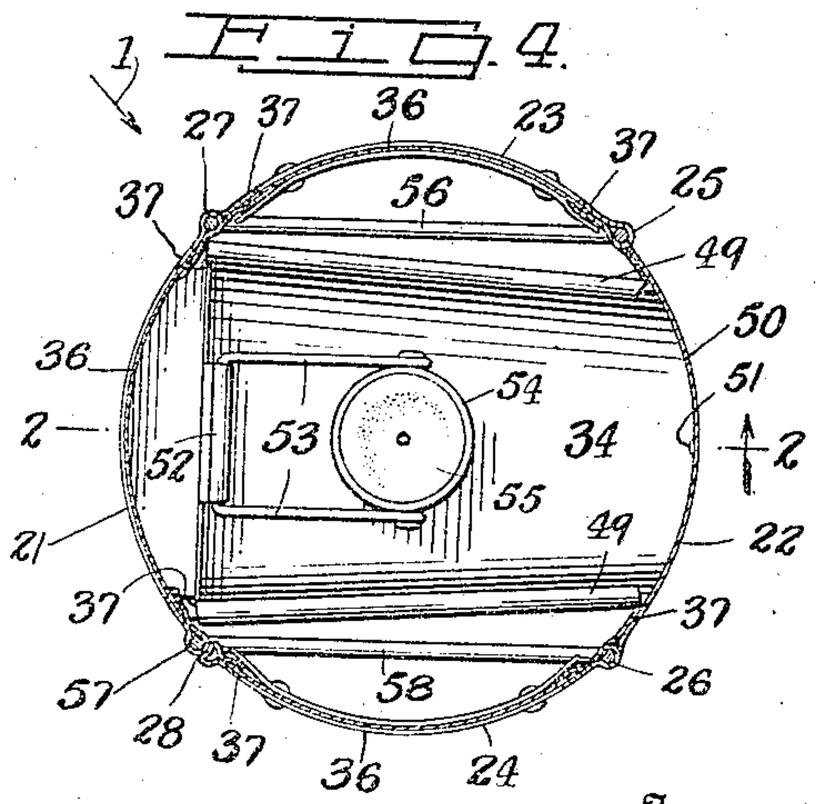


Fig. 4.



Inventor

Charles H. Stonebridge

By his Attorneys

Edgar Tate & Co.

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3 SHEETS—SHEET 2.

FIG. 5.

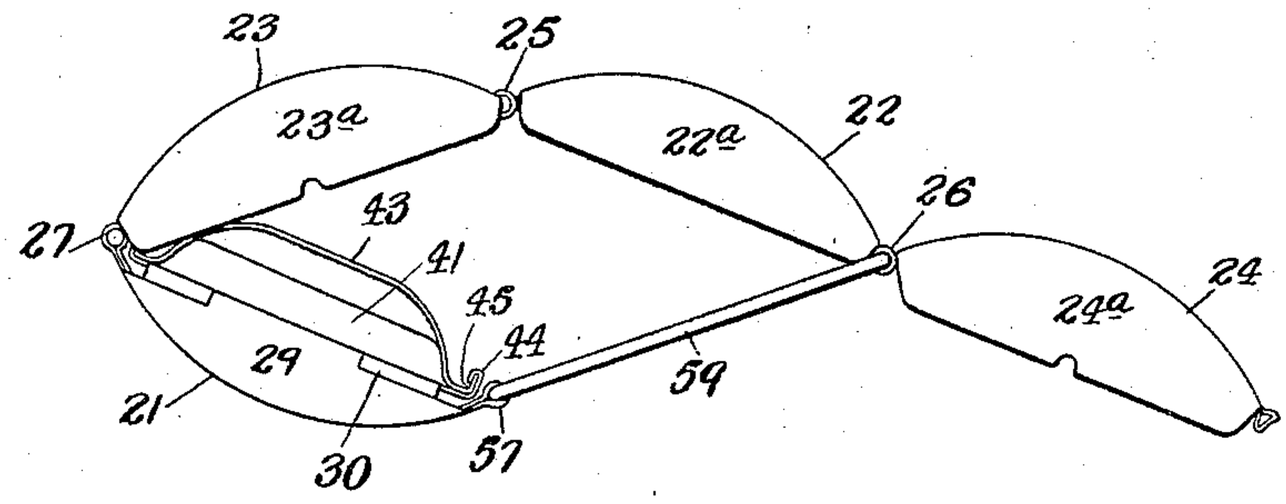


FIG. 6.

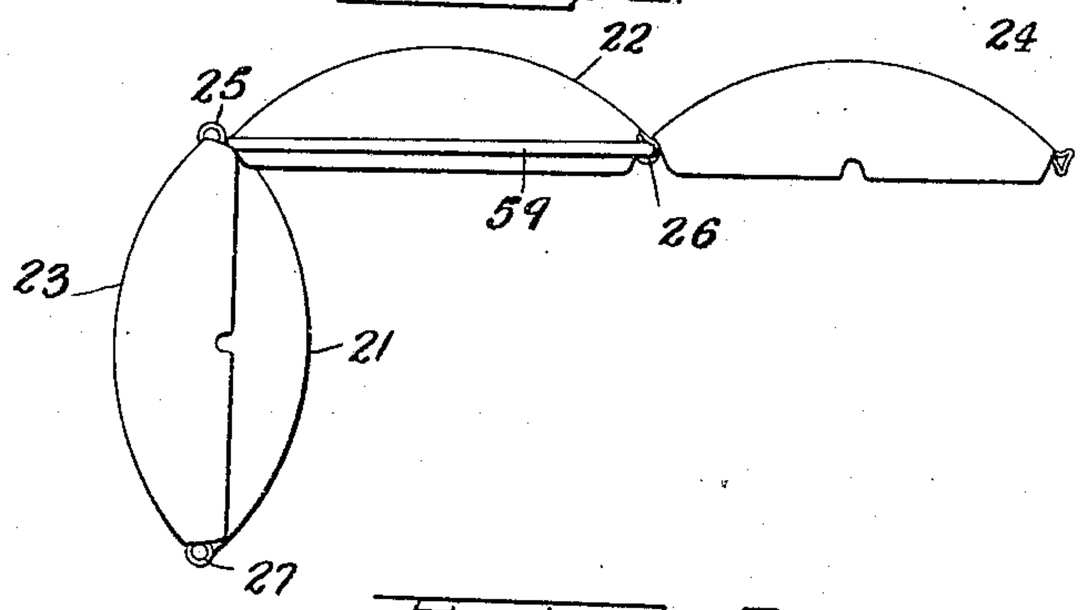


FIG. 7.

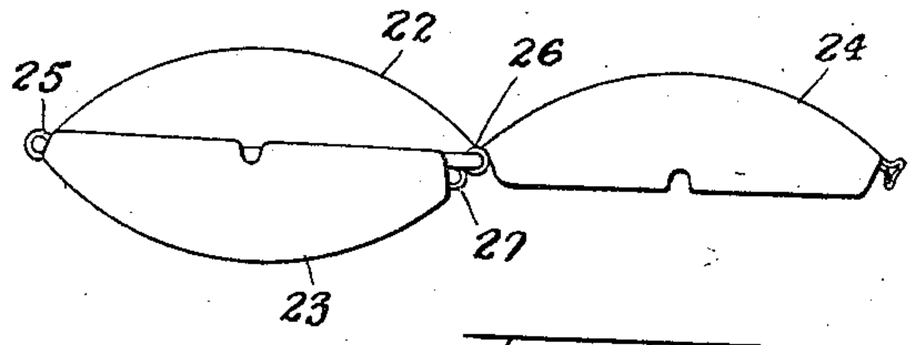


FIG. 9.

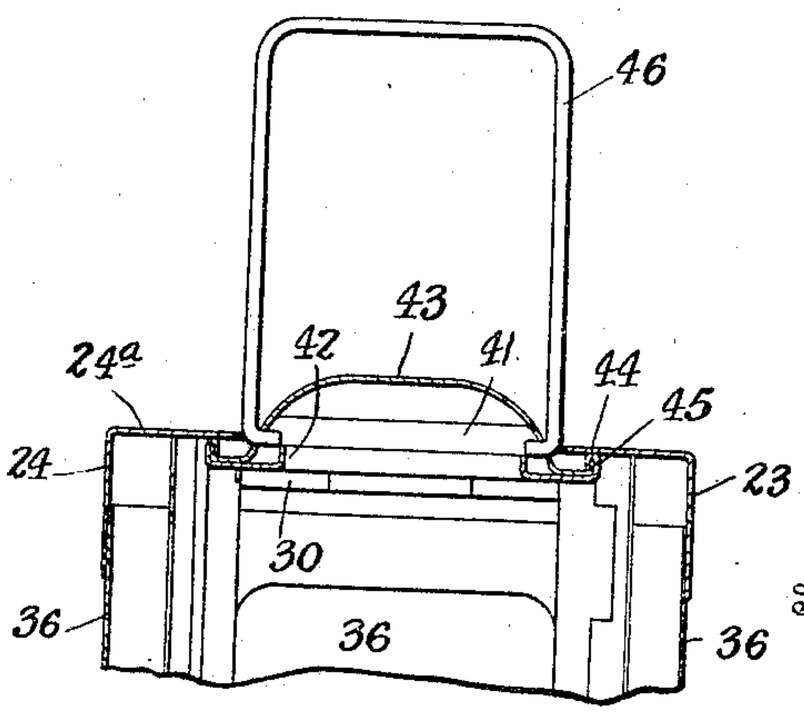
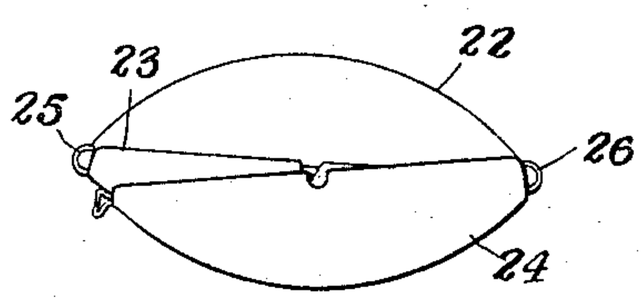


FIG. 8.



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3 SHEETS—SHEET 3.

Fig. 10.

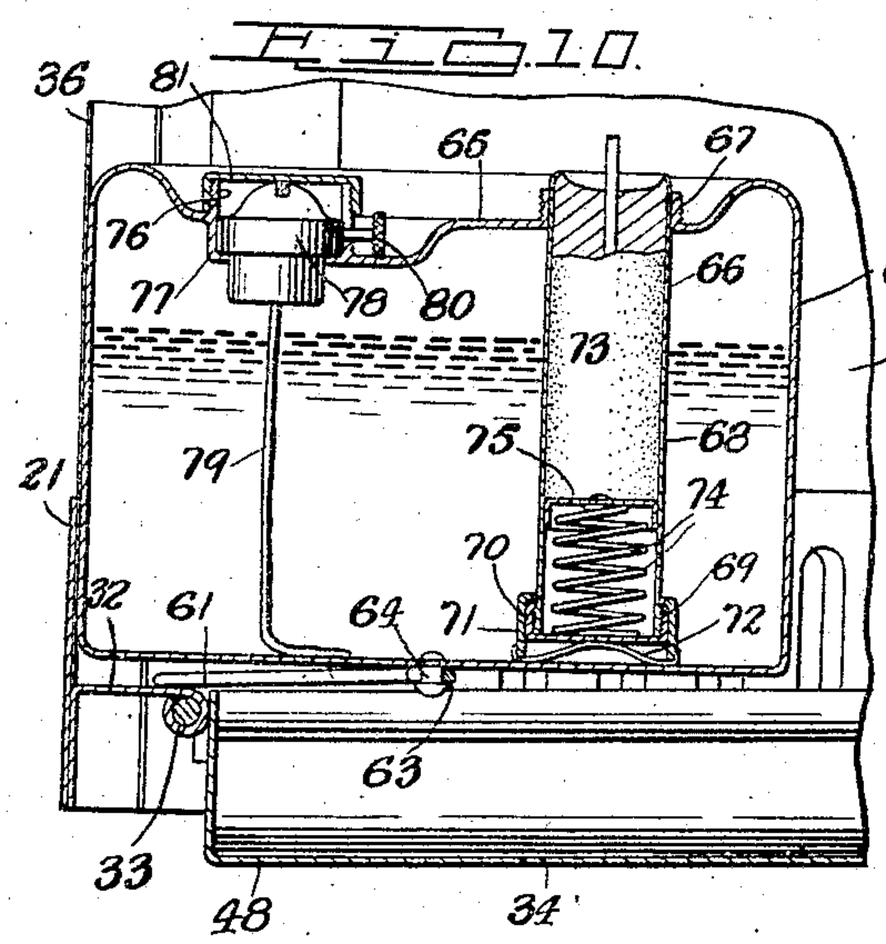


Fig. 11.

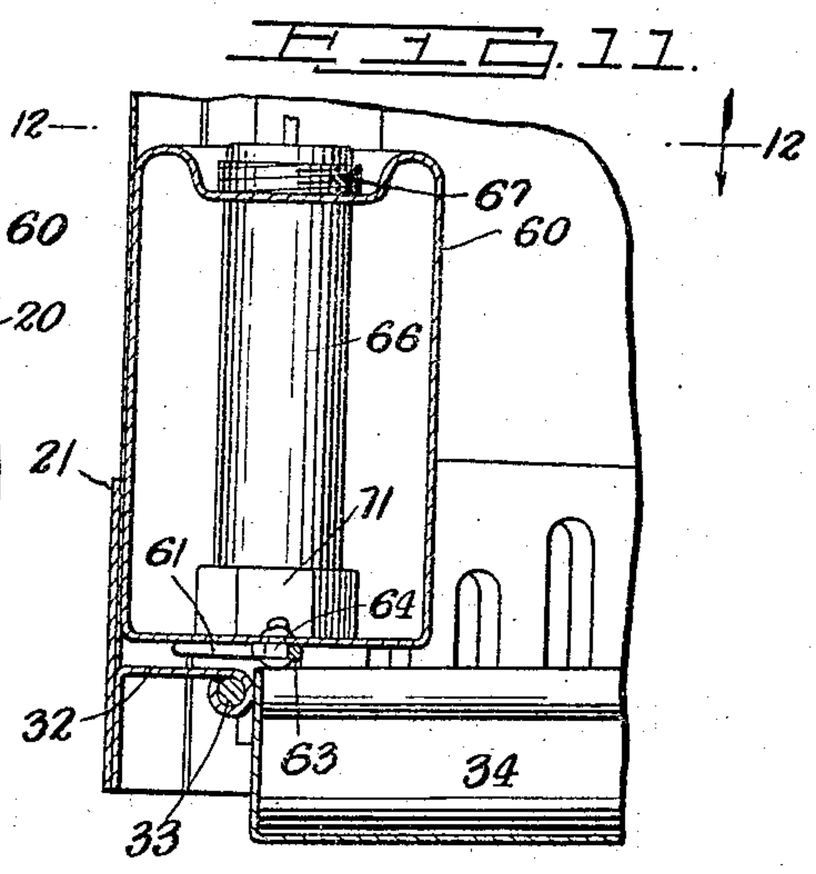


Fig. 12.

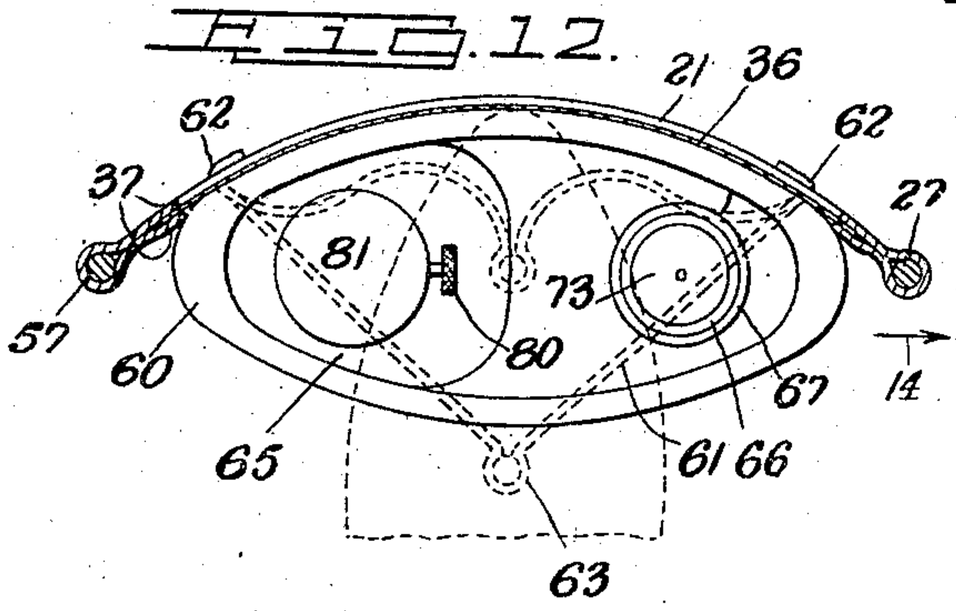


Fig. 13.

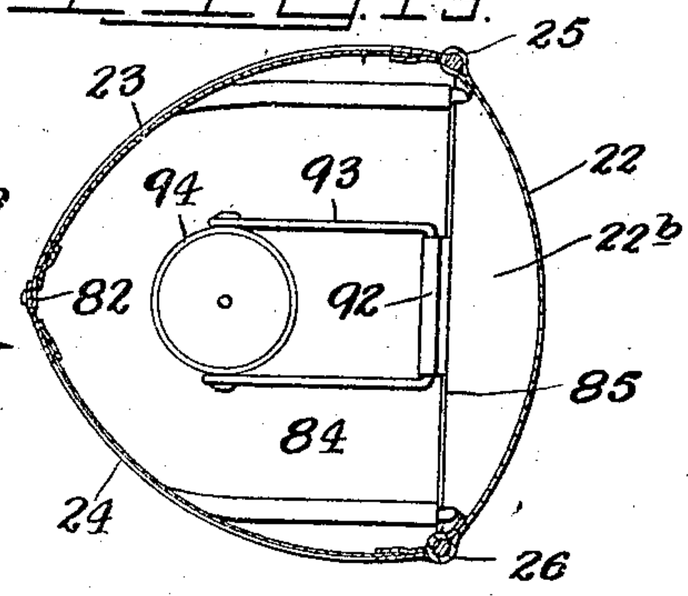


Fig. 14.

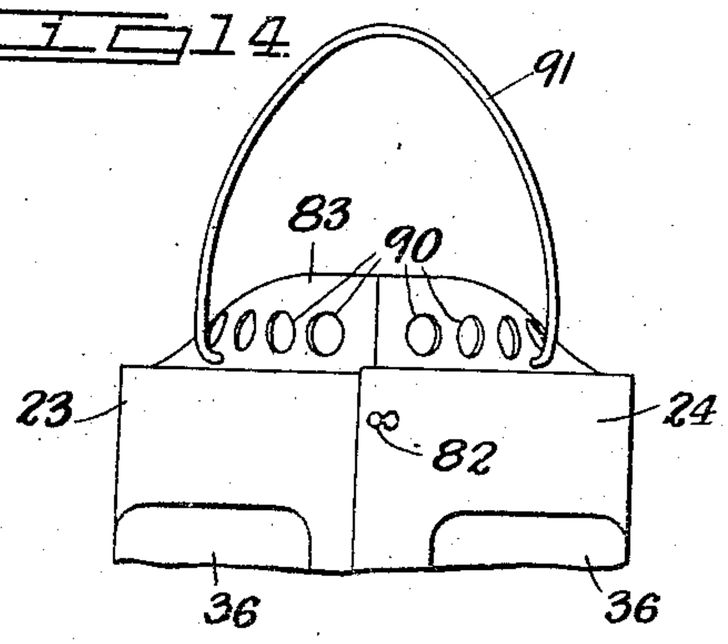


Fig. 15.

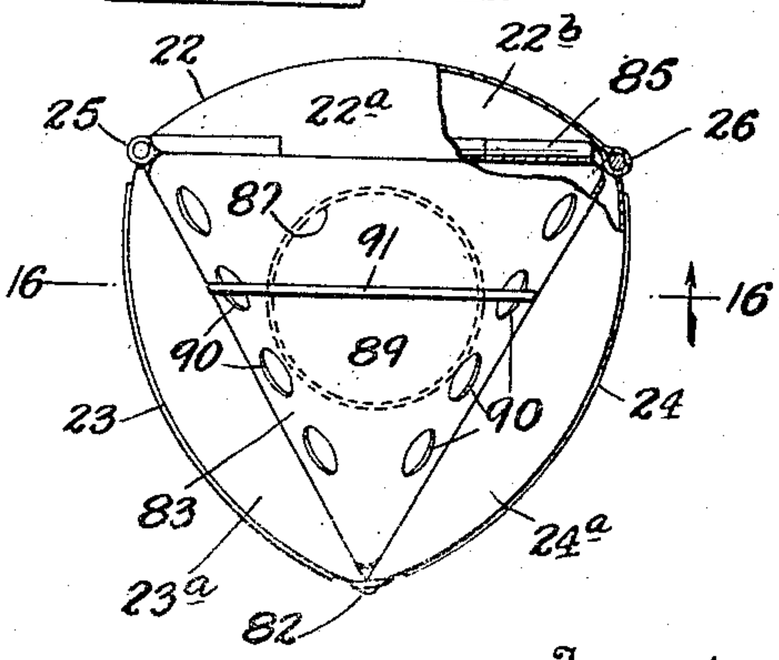
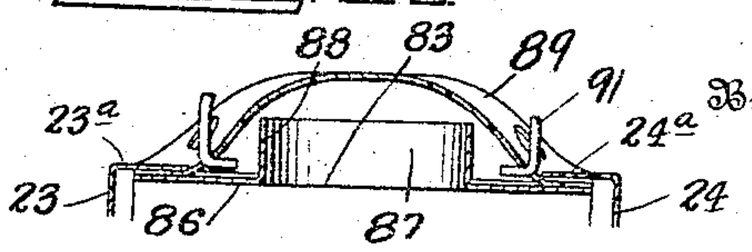


Fig. 16.



Inventor

Charles H. Stonebridge,

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UNITED STATES PATENT OFFICE.

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

FOLDING LANTERN.

1,298,116. Specification of Letters Patent. Patented Mar. 25, 1919.

Application filed June 7, 1918. Serial No. 238,645.

To all whom it may concern:

Be it known that I, CHARLES H. STONEBRIDGE, a citizen of the United States, and residing at New York, in the county of Bronx and State of New York, have invented certain new and useful Improvements in Folding Lanterns, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to folding lanterns and particularly to devices of this class such as described and claimed in U. S. Letters Patent granted to me, No. 890,193, June 9, 1906, and No. 1,152,571, Sept. 7, 1915; and the object of this invention is to provide a lantern of the class described which when folded will contain the medium used for illumination, said medium being either a candle or an oil or carbon burner, or both; and a further object of the invention is to provide a lantern of this class involving a body composed of a plurality of arc-shaped sections hinged together and having top and bottom parts, all adapted to be compactly folded together and adapted to form when opened a round body, or an approximately triangular body, the form of the body depending upon the number of body sections employed; and a still further object of the invention is to provide a device of the class described which when folded together will take up but small space so that it may be carried in the pocket, if desired, and which will withstand rough treatment when shipped or carried from place to place.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:

Figure 1 is a view looking in the direction of the arrow 1 of Fig. 4;

Fig. 2 a central longitudinal section of the lantern taken on the line 2—2 of Fig. 4;

Fig. 3 a view similar to Fig. 2 but showing only a part of the construction and showing the top and bottom members of the lantern in their folded position;

Fig. 4 a section on the line 4—4 of Fig. 2;

Fig. 5 a plan view of the lantern with the top and bottom members in their folded position and showing the first step in the operation of folding the separate body sections of the lantern;

Fig. 6 a view similar to Fig. 5 but showing the second step of folding the lantern;

Fig. 7 a view similar to Figs. 5 and 6 but showing the third step;

Fig. 8 a plan view of the lantern in its folded position;

Fig. 9 a partial section on the line 9—9 of Fig. 2;

Fig. 10 a view similar to Fig. 2 but showing only a part of the construction on an enlarged scale, and showing a combined oil burner and candle holder which I employ;

Fig. 11 a view similar to Fig. 10 but showing the oil burner and candle holder in a different position;

Fig. 12 a partial section on the line 12—12 of Fig. 11;

Fig. 13 a view similar to Fig. 4 but showing a different form of lantern body from that shown in said figure;

Fig. 14 a view looking in the direction of the arrow 14 of Fig. 13 and showing only the top portion of the lantern;

Fig. 15 a plan view of the lantern shown in Figs. 13 and 14 with part of the construction broken away and in section; and,

Fig. 16 a partial section on the line 16—16 of Fig. 15.

In the construction shown in Figs. 1 to 9 inclusive, I have shown a lantern body 20 composed of four arc-shaped sections 21, 22, 23 and 24 which respectively constitute the front, back and opposite sides of the lantern body and which when in their extended or open position form a round lantern body as clearly indicated in Fig. 4 of the drawing, and the side section 23 is hinged to the back section 22 at 25, the side section 24 is hinged to the back section 22 at 26, the front section 21 is hinged to the side section 23 at 27 and the front section 21 and side section 24 having spring lock connection as shown at 28.

The top of the front section 21 is provided with an inwardly directed portion 29 to which is hinged at 30 a top member 31, and secured to the bottom of the front 21 is an L-shaped plate 32 to which is hinged at 33 a bottom member 34. The back 22 is provided at the top and bottom with inwardly directed portions 22^a and 22^b, and the sides 23 and 24 are provided at the tops thereof with similar inwardly directed portions 23^a and 24^a, and the relative height of the inwardly directed portions 29, 22^a, 23^a and 24^a are such that the inwardly directed portion

22[a] will pass over the portion 29, while the portion 23[a] will pass over the portion 22[a] and the portion 24[a] over the portion 23[a] in folding the separate sections of the lantern together into the position shown in Fig. 8.

The front and side sections are each provided with elongated apertures 35 rearwardly of which are placed transparent panels 36, preferably composed of mica, and these panels are retained in position by keepers 37 at the opposite sides of each of the sections 21, 23 and 24. The side sections 23 and 24 are also provided with adjustable air vents 38 which are of the form and construction employed in the patents above referred to.

The top member 31 comprises a base plate 39 having a central rectangular aperture 40, two sides of which are provided with large upwardly directed flanges 41 and the two other sides of which are provided with smaller upwardly directed flanges 42. The aperture 40 communicates with the top central portion of the lamp body when in the position shown in Figs. 1, 2 and 9, and inclosing said aperture is a hood 43 which is secured to the plate 39 by flanges 44 at the opposite sides of said plate which are bent over and around upwardly directed flanges 45 on the edge portions of said hood member, and pivoted to the hood member 43 approximately centrally thereof is a bail or handle member 46. The edge portion of the plate 39 of the top member 31 opposite to the pivoted end of said plate is rounded to conform with the shape of the back section 22 and is adapted to operate in connection with an inwardly directed bead or knob 47 to hold the top member 31 in its raised position.

The hinged bottom member 34 comprises a deep trough-shaped or concavo-convex plate 48, the opposite sides of which are beaded as shown at 49, and the edge portion opposite to the hinged connection of said bottom with the front 21 is rounded as shown at 50, and operates in connection with an inwardly directed bead or knob 51, and the bottom inwardly directed portion 22[b] of the back 22 to hold said bottom in its lowered or operative position.

The hinge portion of the bottom member 34 is provided with a keeper 52 in which is pivoted a yoke-shaped device 53 to the free end of which is pivoted a cylindrical casing 54, forming a candle holder in which a candle 55 is adapted to be placed, or by means of which a candle may be movably supported within the lantern body.

The hinge pins for the hinges at 25 and 27 are connected at the bottom by a cross head 56, while the hinge pin at 26 is connected with the free side and beaded portion of the front 21 as shown at 57, at the bottom by a cross head 58 and at the top with a cross head 59, and this construction is clearly shown in Figs. 1, 4 and 5 of the drawing. The last-named construction involving the cross heads 58 and 59 will, as will be readily understood, be made by two yoke-shaped members which will be inserted from the top and bottom into the hinge at 26 and bead at 57.

The normal position of the parts, or the position they assume when in use is that shown in Figs. 1, 2, 4 and 9 of the drawing, and when it is desired to fold the separate parts or sections of the lantern together, the candle holder 54 carrying the candle 55 is swung into the position shown in Fig. 3, after which the top member 31 is forced downwardly within the top portion of the front section 21, after which the bottom member 34 with the candle holder in its folded position is swung upwardly within the front section 21 into the position shown in Fig. 3, and in this operation it will be noted that the bottom of the candle holder 54 clears the adjacent edge portion of the hood member 43, and the side section 24 is then disengaged from the front section 21 at 28 and the sections are moved into the position shown in Fig. 5, after which the front section 21 is placed within the section 23 as shown in Fig. 6, after which the section 22 is passed over the section 21 as shown in Fig. 7, or to inclose said section, after which the section 24 is passed over the section 23 to inclose the same, and this completes the operation of folding the separate sections of the lantern together, as clearly shown in Fig. 8 of the drawing.

In the folded position of the various parts of the lantern the same may be shipped or carried from place to place and subjected to all the hard usage that would be experienced by campers or other users thereof, without danger of breaking or disfiguring the parts of the lantern in any way, or interfering with, or breaking the candle 55 supported in the holder 54.

When it is desired to extend the various parts of the lantern from their folded position to their operative position, the above described operation of folding the parts together is reversed, as will be readily understood, and by forcing the top member 31 upwardly and the bottom member 34 downwardly the separate parts or sections of the lantern are held against collapsing or folding when in their extended or operative position, but by applying sufficient force or pressure to the top member or bottom member, said parts or sections may be folded together.

In Figs. 10 to 12 of the drawing I have substituted for the candle holder 54 and the means for supporting the same, a container 60 which is approximately elliptical

in form in transverse section, and which is pivotally and tensionally supported in the bottom portion of the front section 21 by means of a spring 61, the ends of which are secured to the section 21 at 62, and the central portion of which is looped as shown at 63, and passed through the looped portion 63 is a rivet 64 which is secured to the bottom of the container 60, this construction being clearly shown in Figs. 10 and 12 of the drawing.

The top of the container 60 is countersunk as shown at 65 and mounted in the container adjacent to one side thereof is a candle holder 66, the top of which extends through an externally threaded sleeve portion 67.

The candle holder 66 comprises a tubular casing 68, the bottom of which is threaded as shown at 69 on which is mounted a cap 70 held within an angular keeper 71 secured to the bottom of the container 60, and a spring 72 is mounted in the bottom portion of the keeper 71 and serves to force the cap 70 upwardly against the bottom of the tubular casing 68 as well as to extend the upper end of the tubular casing 68 above the externally threaded sleeve 67 of the container 60, as shown in Fig. 10, and with this construction when the candle 73 within the holder 66 is burned out and it is desirous of substituting another candle therefor, the tubular casing 68 may be disconnected from the cap 70 as will be readily understood. A spiral spring 74 is secured to the cap 70 and passes up through the tubular casing 68 and provided at its upper end with a seat 75 upon which the candle rests, this construction serving to force the candle upwardly in the tubular casing 68 while the same is burning.

The opposite side of the countersunk top 65 of the container 60 is provided with an externally threaded sleeve portion 76 having a depending cup-shaped portion 77 in which is placed a burner head 78 having a wick 79 which may be adjusted in the burner head 78 by a hand-operated device 80 in the usual manner, and a cap 81 is detachably connected with the externally threaded sleeve portion 76. When the candle is in use the cap 81 remains connected with the sleeve portion 76 at all times, but if it is desired to use the burner 78, said cap will be connected with the sleeve 76 to inclose the top portion of the candle holder 66.

When the container 60 is in use the same may be filled, or partialy filled with a suitable substance, such as alcohol, kerosene or the like, and when the parts or sections of the lantern are in their closed position, the container 60 will assume the position shown in full lines in Figs. 11 and 12, and when the parts or sections of the lantern are in their extended or operative position, the container 60 may be moved outwardly into the position indicated in dotted lines in Fig. 12, or in full lines in Fig. 10, against the tension of the spring 61, and the same will be held in such position by said spring and the contact of the side edge portion of the container with the front section 21. It will be understood that either the candle or the burner may be swung inwardly into the central portion of the lantern depending upon which of the two the owner of the lantern desires to use, and in Fig. 10 of the drawing, the candle is shown in position for use. By providing a container of the class above described which will support or carry the combination of candle or oil or similar burner, a lantern will always be in condition for use if one of the two mediums of illumination become exhausted, and while I have stated that the container 60 is designed to carry or contain alcohol, or kerosene or similar fuel, it will be understood that illuminating mediums other than a burner of the class shown may be combined with a candle and candle holder for accomplishing the result herein set out, and any form of burner may be employed, all that is necessary being to provide means for supporting a candle as well as another means of illumination within the separate sections of a folding lantern.

In Figs. 13 to 16 inclusive, I have shown a modification of the construction shown in Figs. 1 to 9 inclusive, which consists in eliminating the front section 21 thus producing a three-sided or approximately triangular lantern, but which might produce a round lantern if the arc of the sections were laid out to produce such result, and in this construction the back 22 and sides 23 and 24 are of the same general form as the corresponding sections shown in Figs. 1 to 9 inclusive, except that the sides 23 and 24 are detachably connected at 82, and the top member 83 is of triangular form as shown in Fig. 15, and the bottom member 84 is approximately triangular in form and both of said top and bottom members are hinged to the inwardly directed top and bottom portions 22^a and 22^b of the back 22, as shown at 85. The top member 83 comprises a bottom plate 86 having an approximately central opening 87 and an upwardly directed flange 88 is formed around said aperture and the opening 87 is inclosed at the top by a hood 89 which is triangular in form, and the back of which is open. The opposite sides of the hood member 89 are provided with apertures 90, and a handle or bail 91 is pivoted to the hood member 89 approximately, centrally thereof. The bottom member 84 is provided with a keeper 92 similar to the keeper 52 in which is pivoted a yoke-shaped device 93 to which is pivotally connected a candle holder 94 similar in all respects to the candle holder 54.

With this construction the top and bottom members 83 and 84 fold within the back

22 in the manner of the folding of the top and bottom members 31 and 34 within the front section 21, and the sides 23 and 24 are folded one upon another to inclose the top and bottom members within the back 22.

It will be evident that a container similar to the container 60 may be mounted within the lantern body in the construction shown in Figs. 13 to 16 inclusive, or connected with the bottom portion of the back section thereof in the manner of the connection of the container 60 with the front section 21 as shown in Figs. 10 to 12 inclusive, and while I have shown but two forms of lantern bodies, it will be understood that my invention is not limited to the specific form of the body, or the number of sections of which it is composed, nor is my invention limited to the specific means herein shown and described for supporting a candle or a container with a candle supported therein, as well as a burner, and various changes in and modifications of the details of the construction herein shown and described may be made, within the scope of the appended claims, without departing from the spirit of my invention or sacrificing its advantages.

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

1. A lantern of the class described composed of a plurality of body sections which are arc-shaped in form in cross section, said body sections being hinged together to permit of their folding one upon another, a top member hinged to the upper end of one of said body sections, a bottom member hinged to the lower end of said section, said top and bottom members being foldable upon said section and the other of said sections being foldable upon said top and bottom members and said first named section to inclose the same, and an illuminating device supported in the bottom portion of the lantern body and adapted to be contained within the sections and said top and bottom members when folded.

2. A lantern of the class described composed of a plurality of body sections which are arc-shaped in form in cross section, said body sections being hinged together to permit of their folding one upon another, a plurality of said body sections being provided with apertures having transparent panels two of said body sections being provided at the bottom portion thereof with air vents, a top member hinged to the upper end of one of said body sections, a bottom trough-shaped member hinged to the lower end of said section, said top and bottom members being foldable upon said section and the other of said sections being foldable upon said top and bottom members and said first named section to inclose the same, and a candle holder pivotally mounted in the bottom member and adapted to be contained within the separate sections of the lantern when folded together.

3. A lantern of the class described composed of a plurality of body sections which are arc-shaped in form in cross section, said body sections being hinged together to permit of their folding one upon another, a top member hinged to the upper end of one of said body sections, a bottom member hinged to the lower end of said section, said top and bottom members being foldable upon said section and the other of said sections being foldable upon said top and bottom members and said first named section to inclose the same, means for holding said sections against collapsing when in their extended position, means for supporting an illuminating device centrally of the lantern when the body sections are in their extended positions and means for containing said illuminating device within the body sections and top and bottom members when in their folded position.

4. A lantern of the class described composed of a plurality of body sections which are arc-shaped in form in cross section, a top member hinged to one of said body sections and a bottom member hinged to said body section, said top and bottom members being foldable onto said section, and means provided for folding the other of said sections onto said first named section and said top and bottom members.

5. The combination with a lantern composed of a plurality of foldably connected sections, of an illuminating device comprising a container, a candle holder mounted in said container and an oil burner mounted in said container, and means for supporting either the candle holder or the oil burner centrally of the body sections when in their extended position.

6. The combination with a lantern composed of a plurality of foldably connected sections, of an illuminating device comprising a container, a candle holder mounted in said container and an oil burner mounted in said container, means for supporting either the candle holder or the oil burner centrally of the body sections when in their extended position and for supporting said illuminating device within the body sections when in their folded position.

7. The combination with a lantern composed of a plurality of foldably connected sections, of an illuminating device comprising a container, a candle holder mounted in said container, and an oil burner mounted in said container, said container being adapted to be contained within the sections of the lantern when folded, and to be moved into different positions when the separate parts of the lantern are extended.

8. A lantern of the class described, com-

posed of a plurality of body sections which are arc-shaped in form in cross section, a top member hinged to one of said body sections and a bottom member hinged to said body section, said top and bottom members being folded onto said section, means provided for folding the other of said sections onto said first named section and said top and bottom members, the bottom member being trough-shaped in form in cross section, a keeper secured to said bottom member, a yoke-shaped device movably mounted in said keeper and a candle holder pivotally connected with said yoke-shaped device.

9. A lantern of the class described composed of four approximately similar body sections which are arc-shaped in form in cross section, said sections being hinged together to form when said sections are extended a cylindrical body for the lantern, top and bottom members hinged to one of the body sections, said top and bottom members serving to hold the separate sections of the lantern in their extended position, said top and bottom members being foldable inwardly onto the section with which they are pivotally connected and the other of said body sections being foldable onto said first named section and said top and bottom members.

10. A lantern of the class described composed of four approximately similar body sections which are arc-shaped in form in cross section and which are provided with inwardly directed top and bottom portions, said sections being hinged together to form when said sections are extended a cylindrical body for the lantern, top and bottom members hinged to one of the body sections, said top and bottom members coöperating with the opposite body section to hold all of the body sections in their extended position, said top and bottom members being foldable inwardly onto the section with which they are pivotally connected and the other of said body sections being foldable onto said first named section and said top and bottom members, and one side edge of one of said last named body sections being detachably connected with one side edge of the first named body section.

11. The combination with a lantern composed of a plurality of foldably connected parts involving arc-shaped body sections and top and bottom members, of an illuminating device comprising a container, a candle holder mounted in said container and an oil burner mounted in said container, said container being mounted to move into different positions within the lantern when the separate parts thereof are extended and to be contained within the separate parts of the lantern when folded.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 4th day of June, 1918.

CHARLES H. STONEBRIDGE.

Witnesses:
C. E. MULREANY,
H. E. THOMPSON.