

F. K. WRIGHT.
 LANTERN FRAME.
 APPLICATION FILED NOV. 5, 1907.

920,889.

Patented May 4, 1909.

Fig. 1.

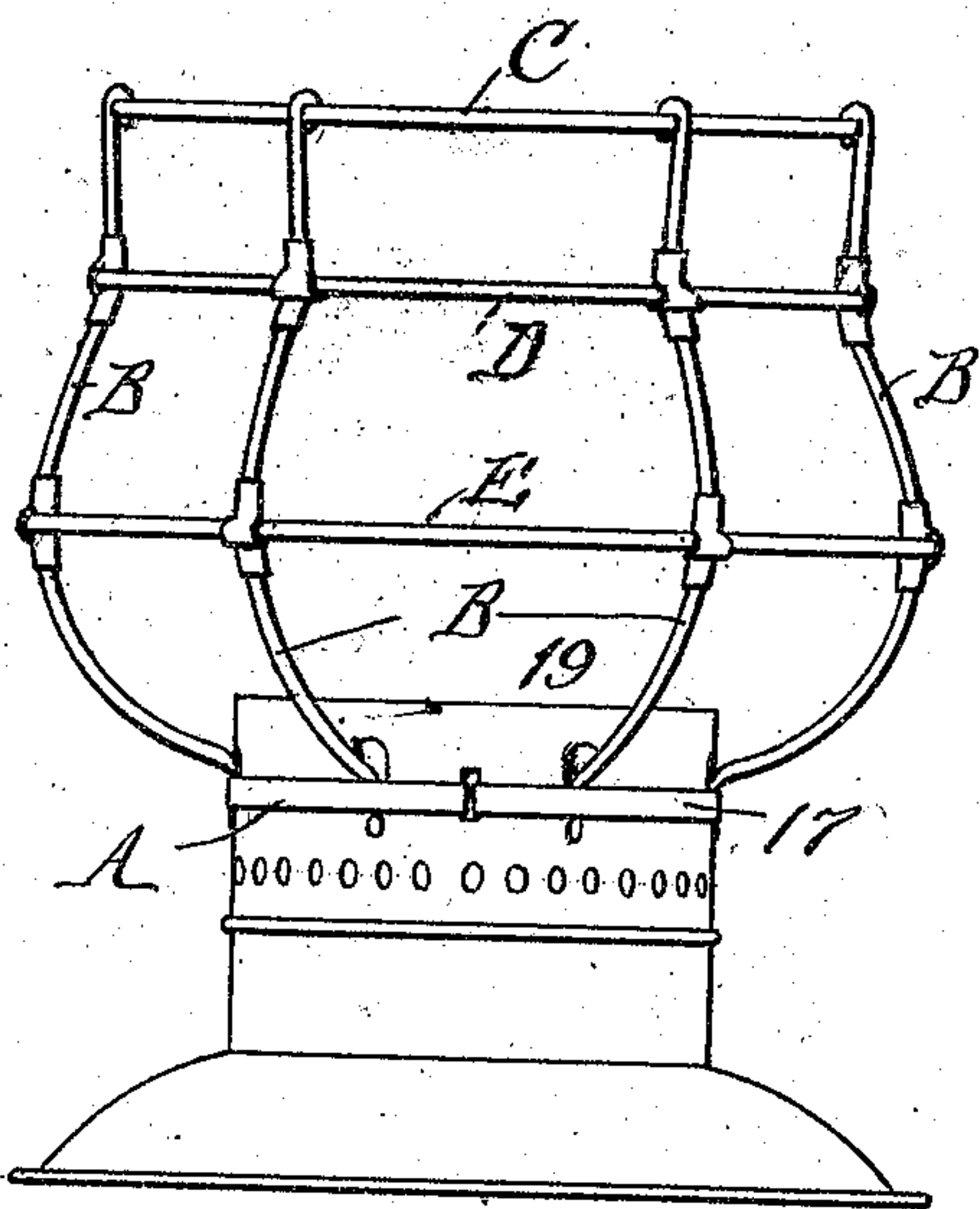


Fig. 2.

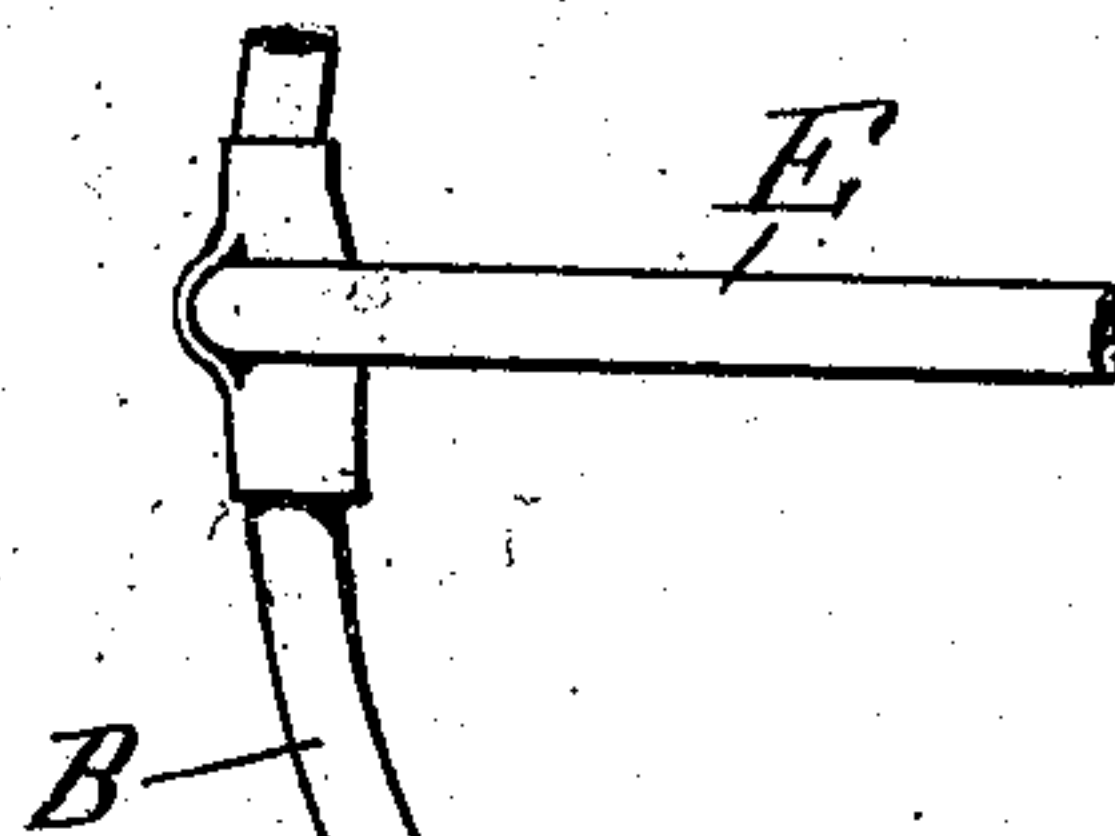


Fig. 3.

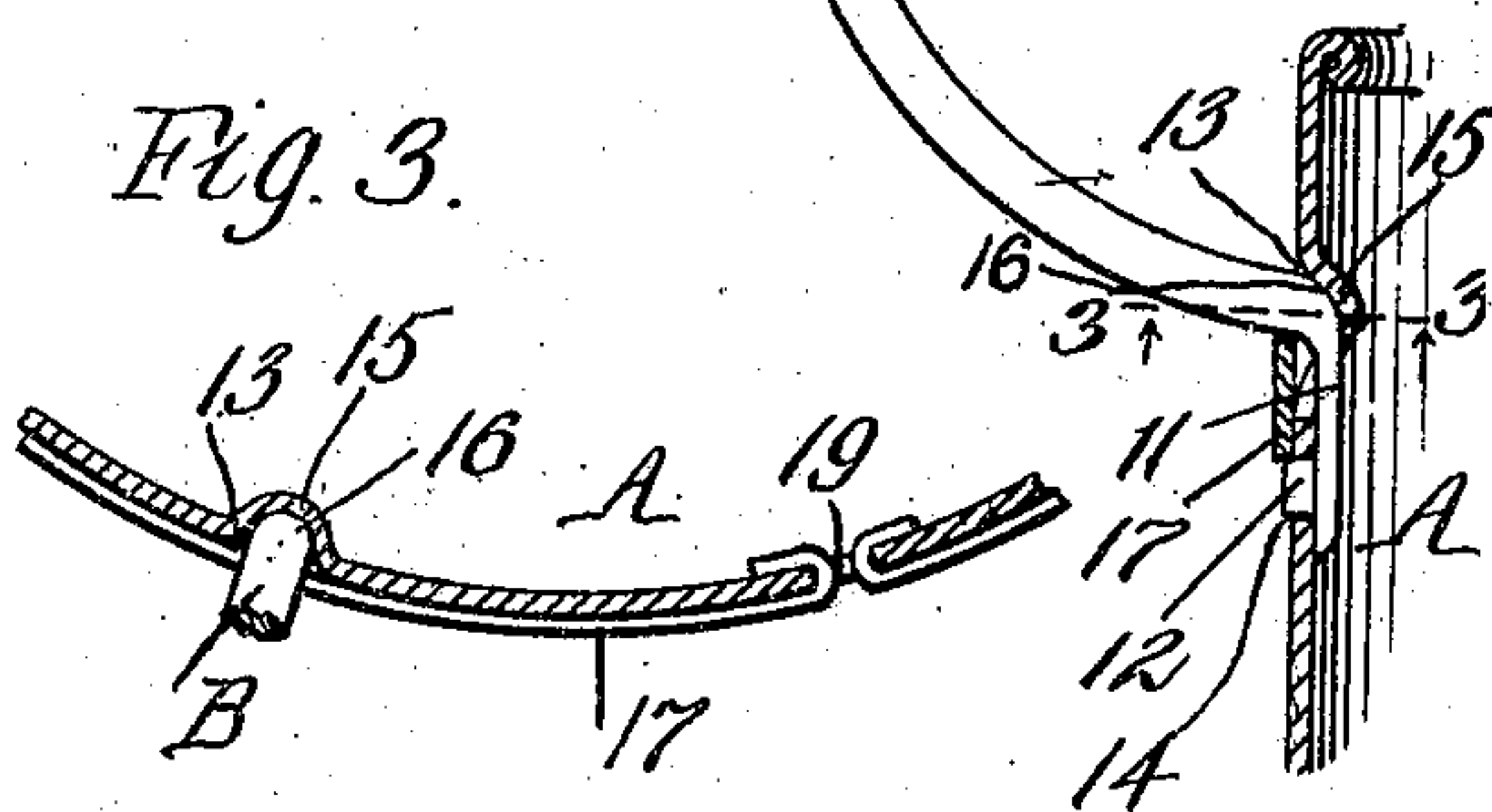


Fig. 4.

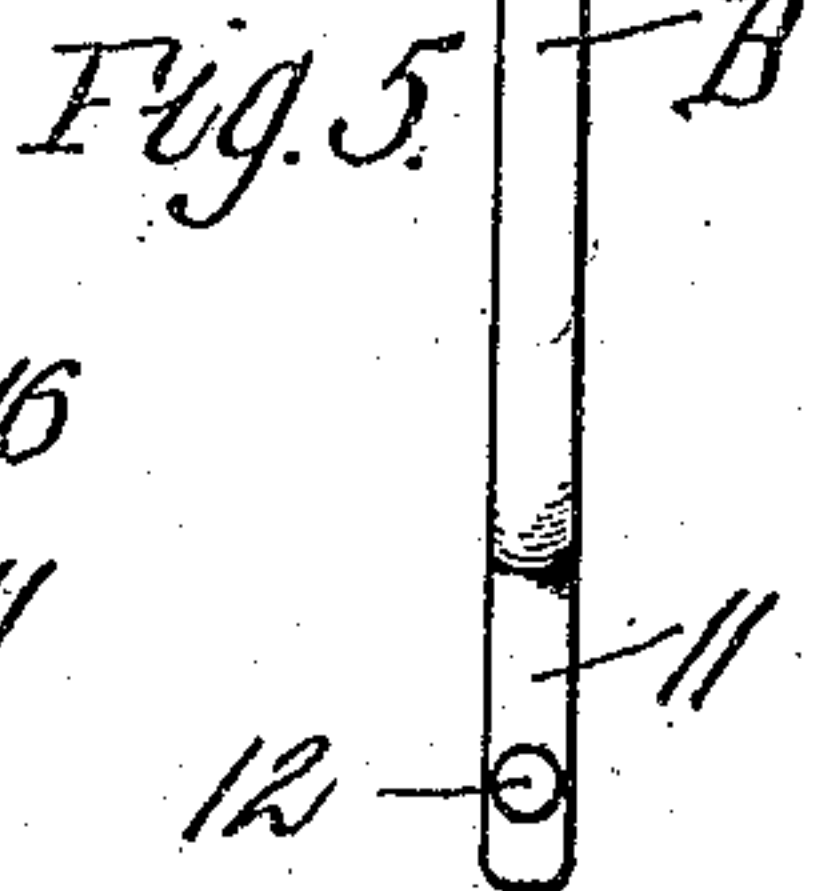
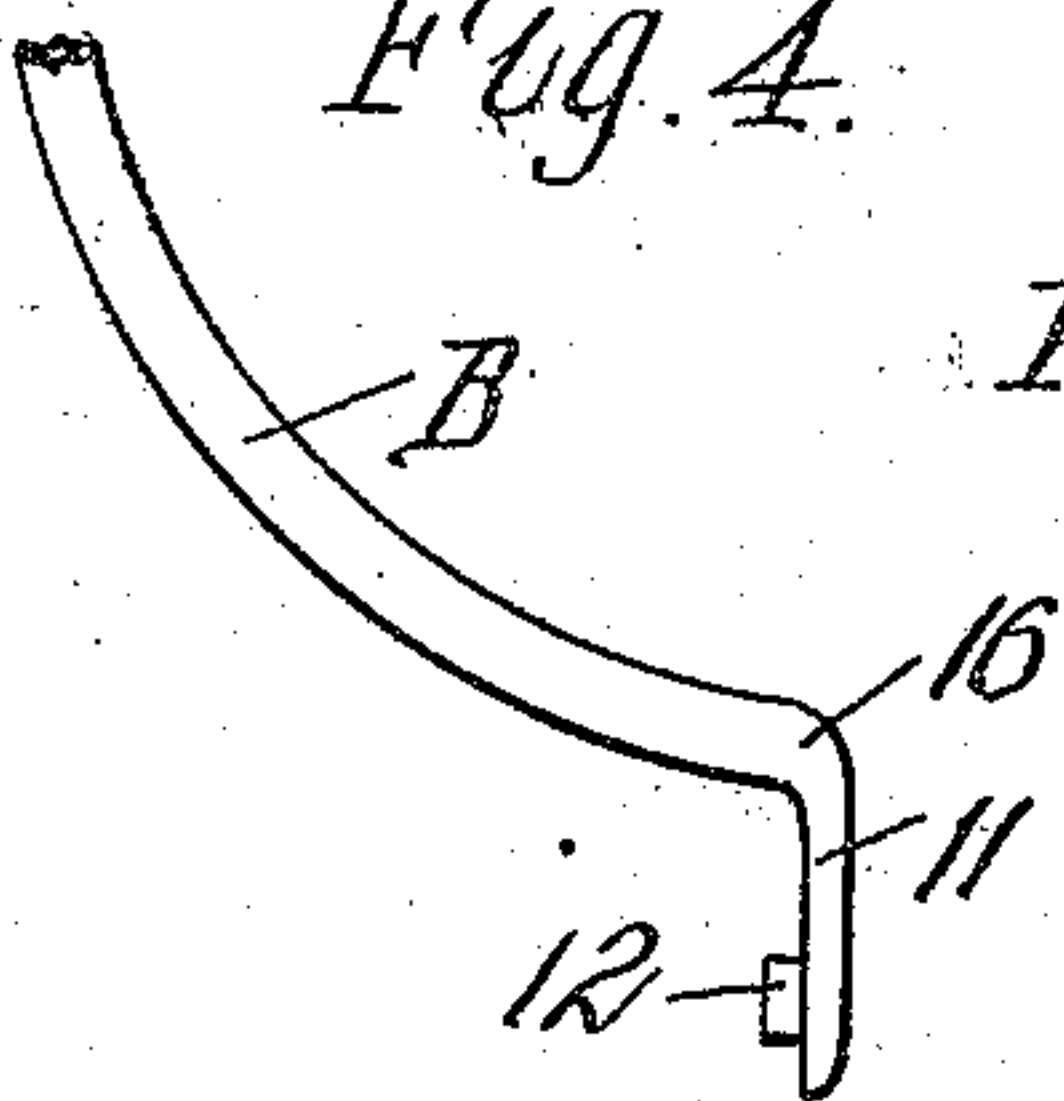


Fig. 6.

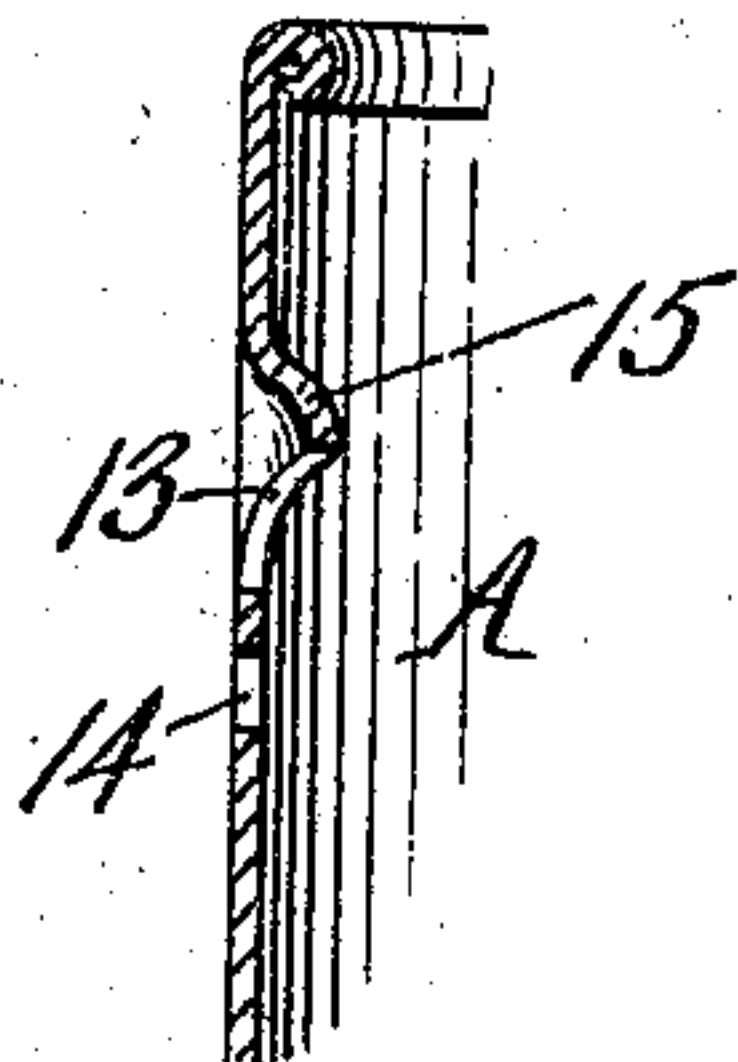


Fig. 7.

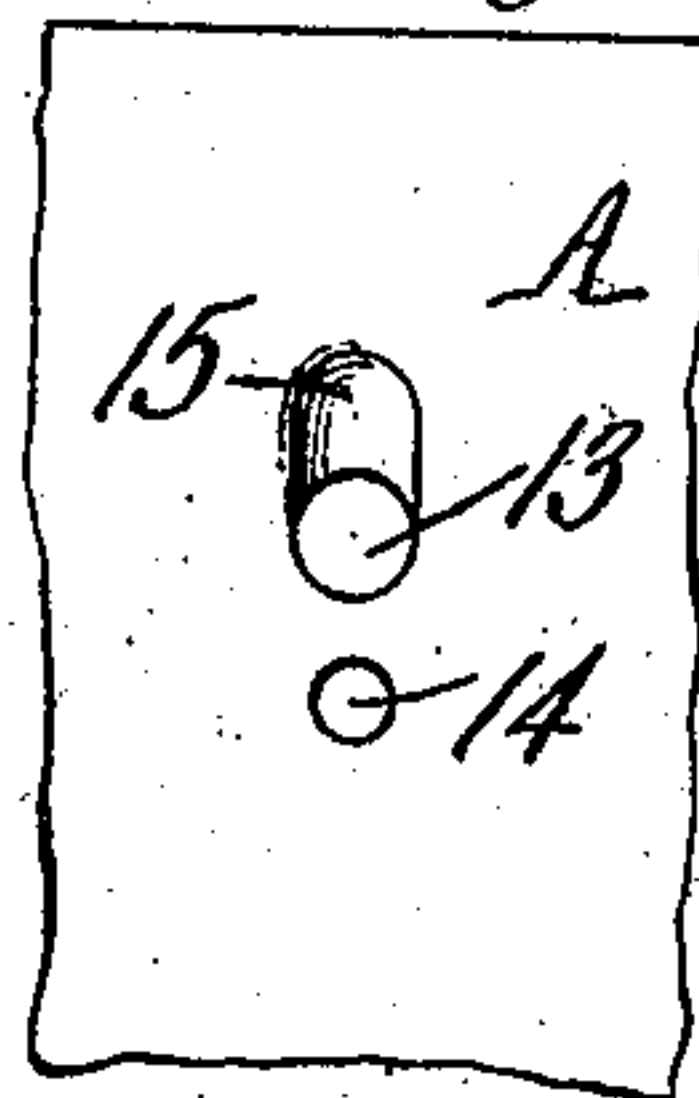


Fig. 8.

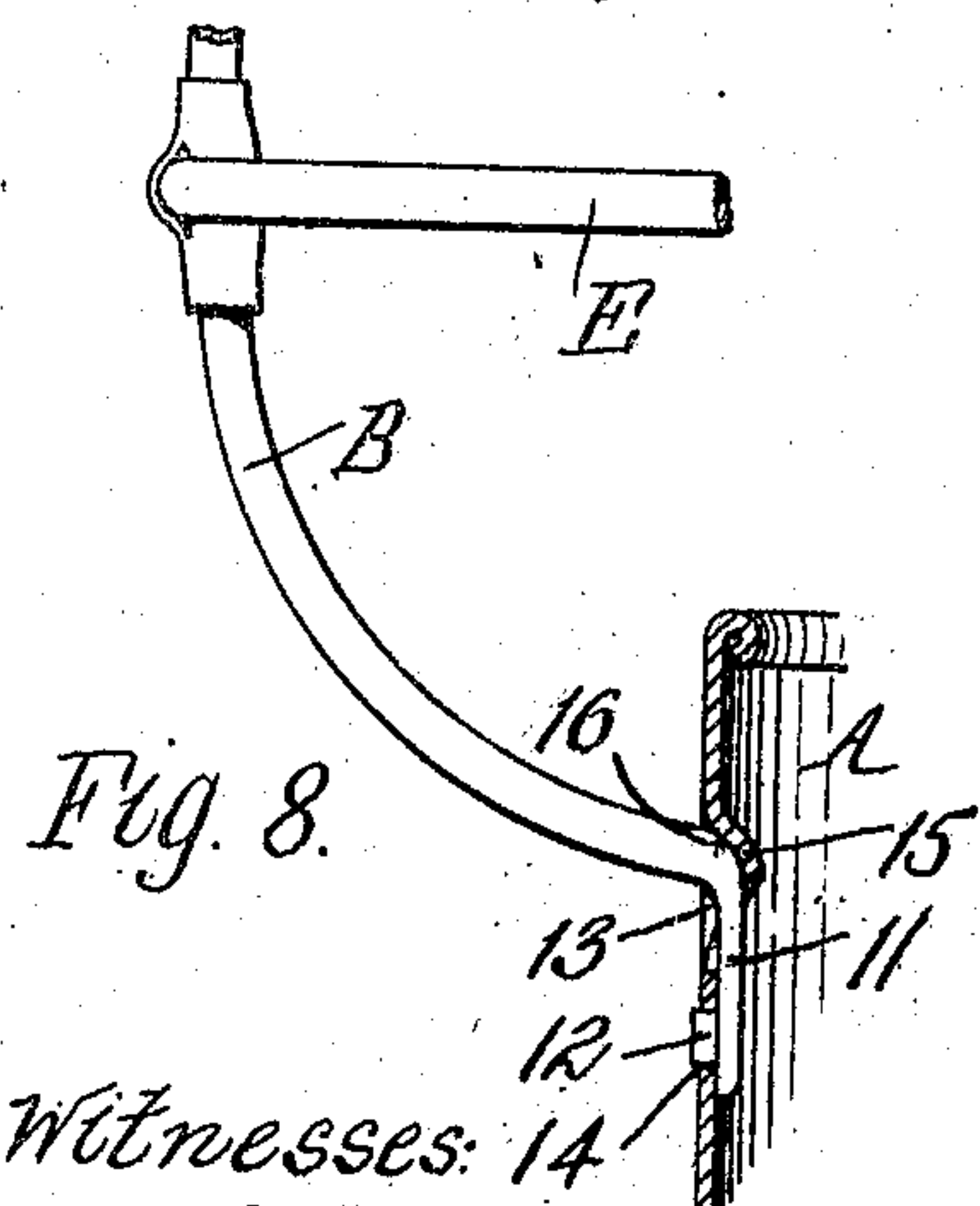


Fig. 9.

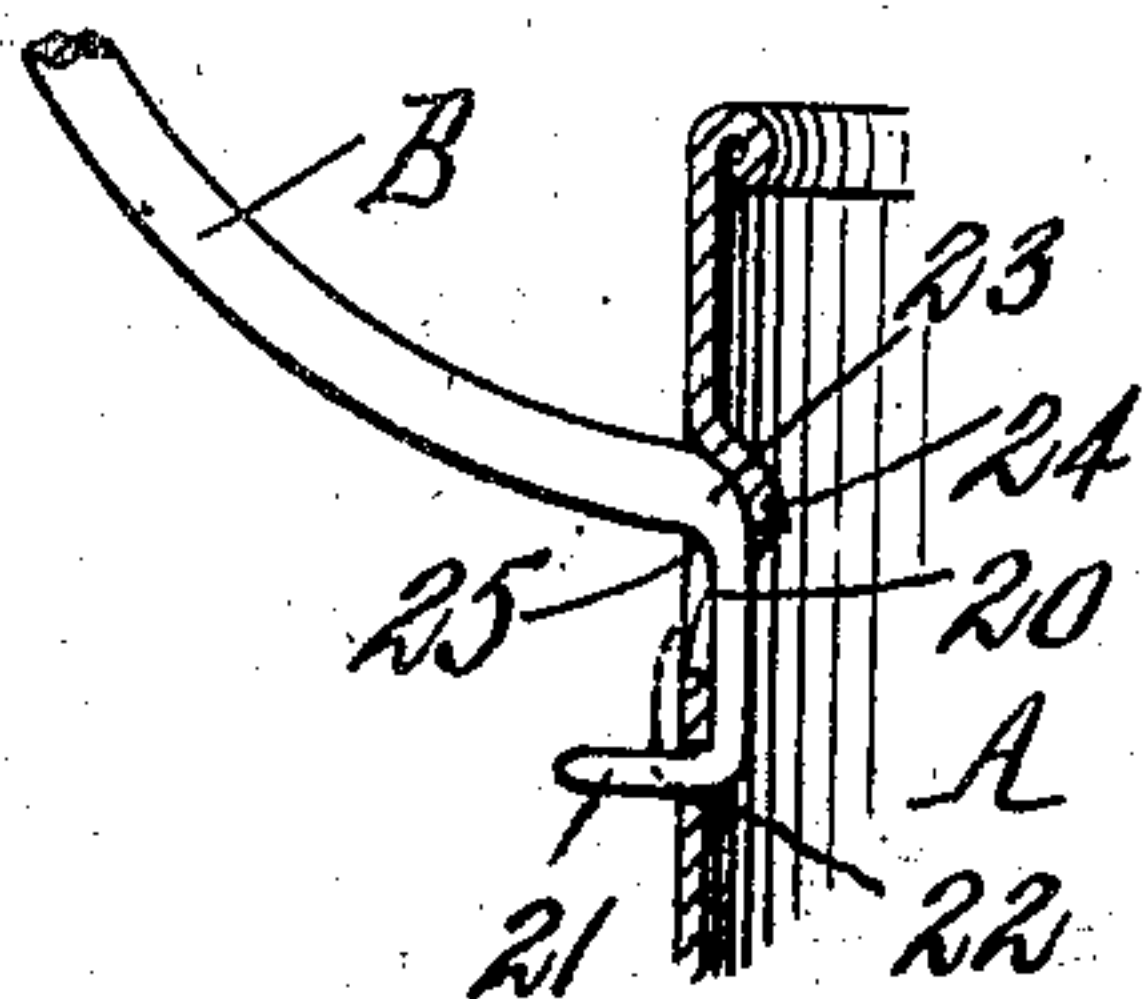
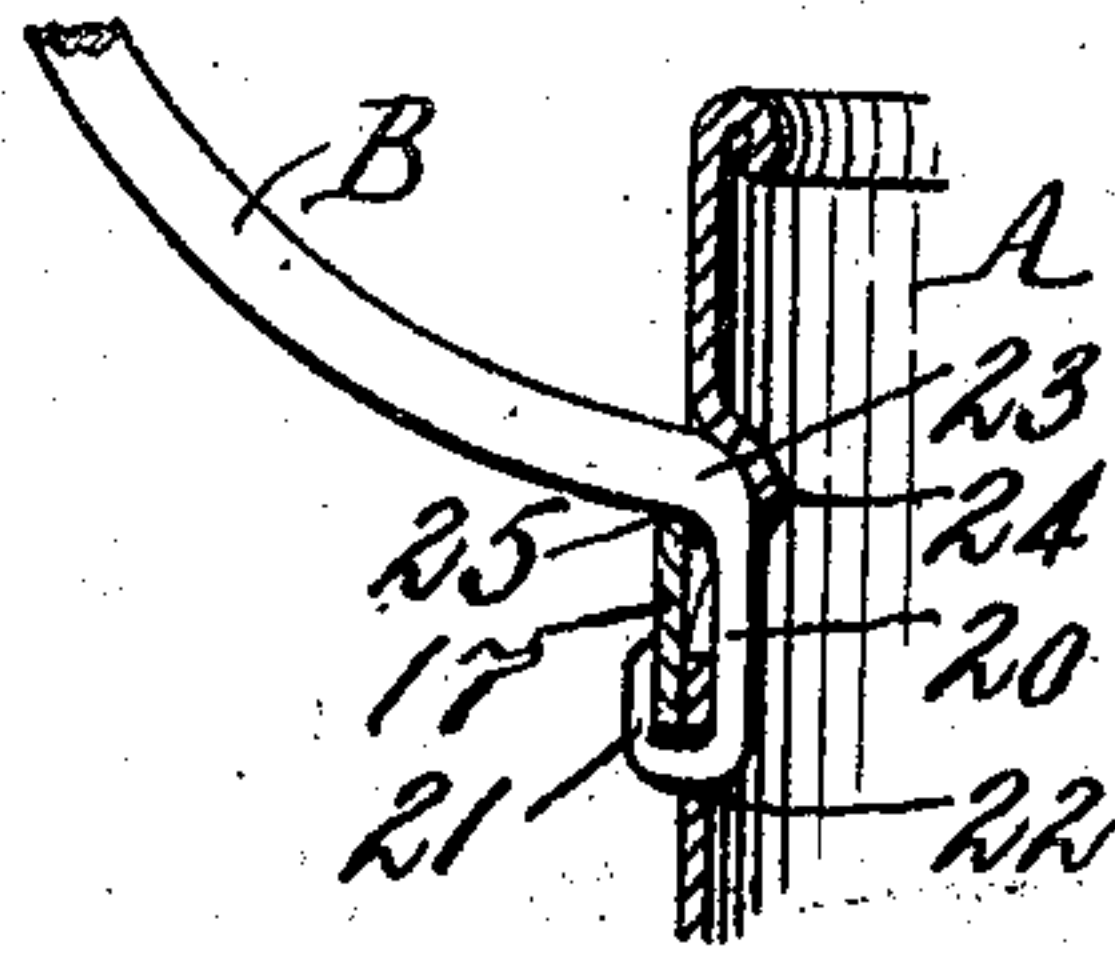


Fig. 10.



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UNITED STATES PATENT OFFICE.

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LANTERN-FRAME.

No. 920,889.

Specification of Letters Patent.

Patented May 4, 1909.

Application filed November 5, 1907. Serial No. 400,855.

To all whom it may concern:

Be it known that I, FREDERICK K. WRIGHT a citizen of the United States, residing at Syracuse, in the county of Onondaga and State of New York, have invented a new and useful Improvement in Lantern-Frames, of which the following is a specification.

This invention relates to that class of lantern frames which comprise a body or hoop of sheet metal and upright guard wires secured thereto with their lower ends.

The object of this invention is to provide improved means for securing the lower ends of the guard wires to the sheet metal hoop or body in a simple, strong and durable manner and at comparatively small expense.

In the accompanying drawings: Figure 1 is an elevation of a lantern frame provided with my improvement in the preferred form. Fig. 2 is a sectional elevation, on a greatly enlarged scale, of the lower end of one of the upright guard wires and the adjacent part of the body hoop. Fig. 3 is a horizontal section in line 3—3, Fig. 2. Fig. 4 is a detached side elevation of the lower end of the guard wire. Fig. 5 is a detached front elevation thereof. Fig. 6 is a detached sectional elevation of the part of the body hoop to which the lower end of the guard wire is secured. Fig. 7 is a detached front elevation of this part of the body hoop. Fig. 8 is a sectional elevation, similar to Fig. 2, showing a modified embodiment of the invention. Fig. 9 is a sectional elevation, similar to Fig. 2, showing another modified embodiment of the invention, the wire being shown ready to be secured to the body hoop. Fig. 10 is a sectional elevation, similar to Fig. 2, showing another modified embodiment of the invention, the wire being secured to the body hoop.

Like reference characters refer to like parts in the several figures.

A represents the body hoop which may be made of tin or other suitable sheet metal, B the upright guard wires which are secured with their lower ends to the body hoop, C the upper horizontal guard ring to which the upper ends of the upright wires are secured, and D E the intermediate horizontal guard rings which connect the upright wires between the body hoop and the top ring.

In the construction represented in Figs. 1-8, each upright guard wire is provided at its lower end with an attaching shank which extends downwardly on the inner side of the body hoop and is provided on its front

side, near its lower end, with an outwardly or forwardly projecting stud or lug 12. The body hoop is provided with an upper opening 13 and a lower opening 14 for the reception of each guard wire. The metal above the upper opening 13 is bent back to form a depressed seat or back support 15 against which rests the bent portion or elbow 16 of the guard wire adjacent to the upper end of the attaching shank. The lower opening 14 is arranged below the upper opening 13 in the proper location to receive the stud or lug 12.

The guard wire is inserted with its attaching shank through the upper opening 13 in such manner that the shank extends downwardly on the inner side of the body hoop, engages with its stud 12 in the lower opening 14 and rests with its elbow 16 against the back support 15. When the several upright guard wires have been connected in this manner with the body hoop, the horizontal guard rings are connected to the upright wires and the frame is then dipped in molten tin in the usual manner, whereby the parts are permanently secured together.

It is preferred to support the lower ends of the guard wires by a retaining or supporting band 17, Figs. 1, 2, 3 and 10, which extends around the body hoop below the elbows 16 of the several guard wires and serves to hold the elbows of the wires firmly against their back supports 15, thereby adding greatly to the security and rigidity of the connection and facilitating the assembling of the frame. This band, which forms an external support for the guard wires, is preferably secured to the body hoop by inserting its ends through an opening 19 in the body hoop and bending the ends back on the inner side of the body hoop, as represented in Fig. 3. This supporting or retaining band may, however, be omitted and the guard wires held in place by the guard rings, as represented in Fig. 8.

In the construction represented in Figs. 9 and 10, the attaching shank 20 of the guard wire is provided at its lower end with a forwardly projecting lug 21 which is so long that it can be bent up or down after it is inserted into the lower opening 22. In the construction represented in Fig. 9, this lug is bent up against the outer side of the body hoop, as represented by dotted lines, and in the construction represented in Fig. 10, the lug is bent up against the supporting band 17. In both constructions the elbow portion 23 of the guard wire rests against the back seat or

support 24 above the upper opening 25 in the same manner as in the other described constructions.

I claim as my invention:

- 5 1. In a lantern frame, comprising a body hoop and upright guard wires, the combination with a body hoop having for each guard wire two openings, one above the other, and a back support adjacent to the upper opening, of an upright guard wire having at its lower
10 end a downwardly extending attaching shank which rests against the inner side of the body hoop between said openings and is provided near its lower end with a lug which extends
15 forwardly into said lower opening, the portion of the wire adjacent to the upper end of the shank being arranged in the upper opening and resting against said back support, substantially as set forth.
- 20 2. In a lantern frame comprising a body hoop and upright guard wires, the combination with a body hoop having two openings for each guard wire, one above the other, and a back support adjacent to the upper opening, of an upright guard wire having at its
25 lower end a downwardly extending attaching shank which rests against the inner side of the body hoop between said openings and is provided near its lower end with a lug
30 which extends forwardly into said lower opening, the portion of the wire adjacent to the upper end of the shank being arranged in the upper opening and resting against said back support, and an external support ar-
35 ranged on the outer side of the body hoop underneath the lower portion of the guard wire, substantially as set forth.

3. In a lantern frame, comprising a body hoop and upright guard wires, the combination with a body hoop provided for each guard wire with two openings, one above the other, of guard wires having at their lower ends attaching shanks which rest against the inner side of the body hoop between said openings and are provided near their lower ends with lugs which extend forwardly into said lower openings, while the portions of the wires which are adjacent to the upper ends of the shanks are arranged in said upper openings, means for holding the attaching shanks against inward movement, and an external supporting band, substantially as set forth. 40 45 50

4. A lantern frame comprising a body hoop provided for each guard wire with two openings, one above the other, and with means for holding the wires against inward movement, upright guard wires, each having at its lower end an attaching shank which rests against the inner side of the body hoop between said openings and is provided near its lower end with a forwardly projecting lug which extends into said lower opening, while the portion of the wire which is adjacent to the upper end of the shank is arranged in said upper opening, and means for connecting the several upright wires, substantially as set forth. 55 60 65

Witness my hand in the presence of two subscribing witnesses.

FREDERICK K. WRIGHT.

Witnesses:

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P. L. SALMON.