No. 628,461. Patented July 11, 1899.

C. T. HAM.

TUBULAR LANTERN.

(Application filed Oct. 21, 1898.)

(No Model.)

Fig. 1.

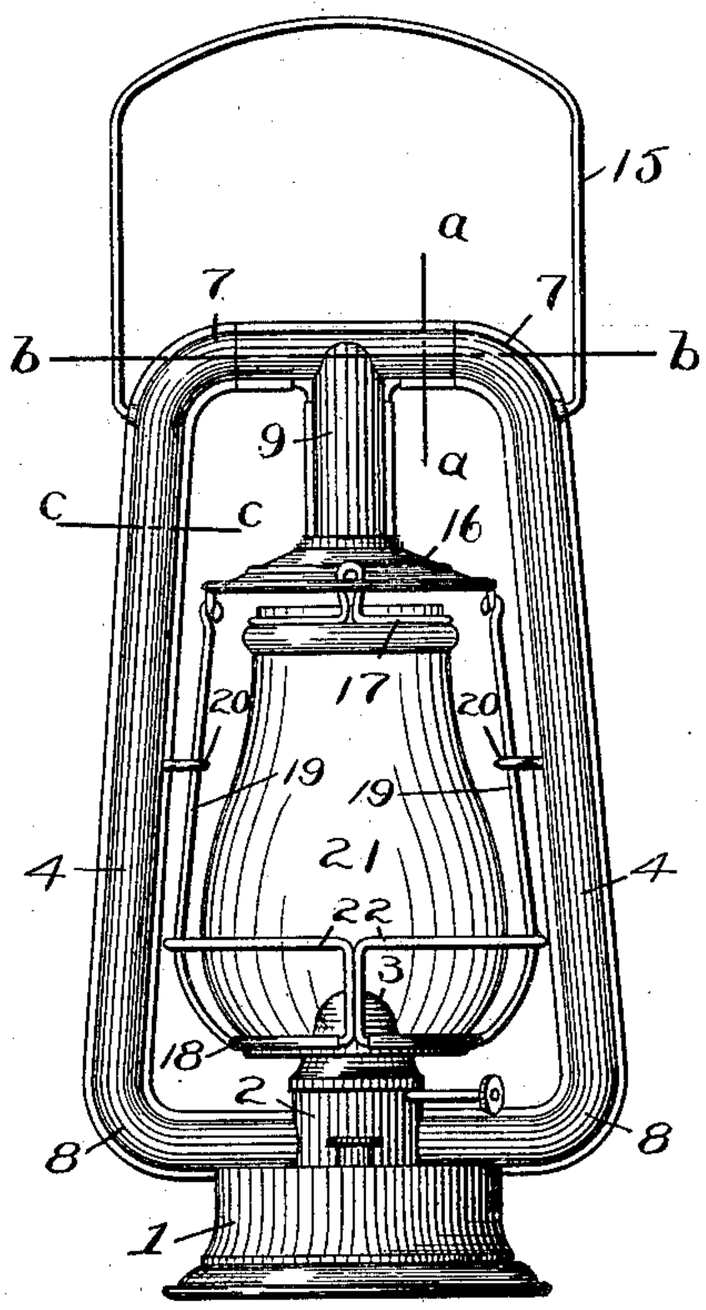

Fig. 2.

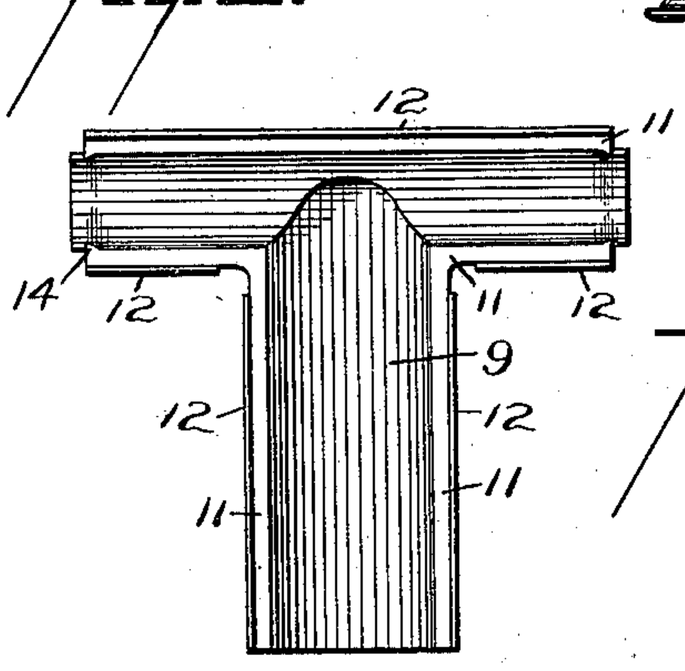

Fig. 3.

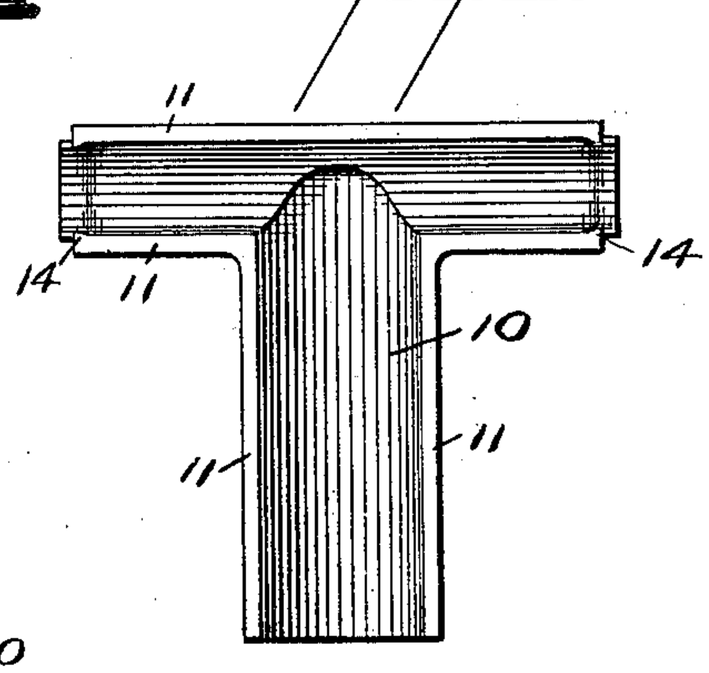

Fig. 4.

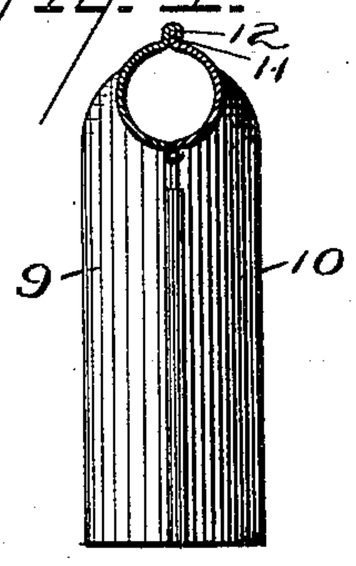

Fig. 5.

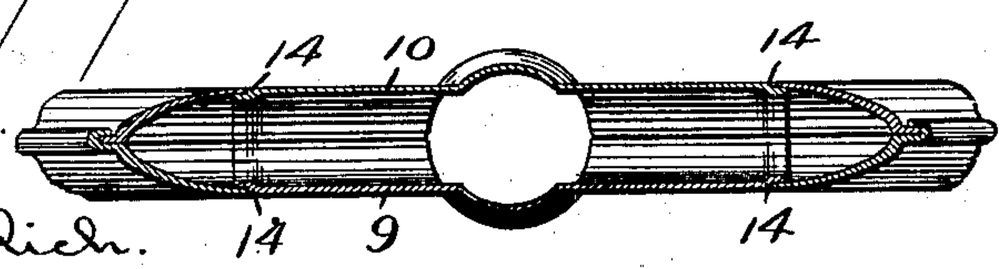

Fig. 6.

Witnesses.
Charles F. Logan.
G. Willard Rich.

Inventor.
Charles T. Ham.
by Church & Church
his Attorneys

UNITED STATES PATENT OFFICE.

CHARLES T. HAM, OF ROCHESTER, NEW YORK, ASSIGNOR TO THE C. T. HAM MANUFACTURING COMPANY, OF SAME PLACE.

TUBULAR LANTERN.

SPECIFICATION forming part of Letters Patent No. 628,461, dated July 11, 1899.

Application filed October 21, 1898. Serial No. 694,198. (No model.)

To all whom it may concern:

Be it known that I, CHARLES T. HAM, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Tubular Lanterns; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference-numerals marked thereon.

My present invention relates to tubular lanterns, and has for its objects to improve, simplify, and cheapen their construction, enabling the tubular frame of the lantern to be formed from simple sheet-metal stampings and connected with minimum amount of soldering and still have the frames strong and serviceable and not liable to come apart or to be damaged in use.

To these ends it consists in the improvements hereinafter described, the novel features being pointed out particularly in the claims at the end of this specification.

In the drawings, Figure 1 is a front elevation of a lantern constructed in accordance with my invention; Figs. 2 and 3, views of the plates or stampings from which the central and upper tubes are constructed; Fig. 4, a sectional view on the line *a a* of Fig. 1; Fig. 5, a sectional view on the line *b b* of Fig. 1, and Fig. 6 a sectional view on the line *c c* of Fig. 1.

Similar reference-numerals in the several figures indicate similar parts.

The oil-pot of the lantern (indicated by 1) is of the ordinary or any preferred construction, having the air-chamber 2 and the burner-cone 3 above it, and upon the upper portion of the oil-pot are secured the lower horizontal portions of the side tubes 4, communicating with the air-chamber, as usual, and extending upward at the sides of the lantern. These tubes are each formed of the two half-round sheet-metal stampings or sections united by the flanges or seams extending in the plane of the tubes and on the inner and outer sides thereof, as shown. The seams or joints between the sections are formed by the short flat flanges 5 on one section being overlapped by the longer flanges 6 on the other, the joint being effected by simply turning the longer flanges over, as shown in Fig. 6, making a tube having a practically smooth interior and one that is very strong, does not require soldering, and has the outer sides protected by the seams from being readily indented or otherwise damaged. The tubes are each constructed with the upper and lower elbows 7 and 8, respectively, and their upper ends are connected by the upper horizontal tube, preferably formed integral with the central or bell tube, said tubes forming the top piece of the lantern and being of substantially the shape of the letter T. This top piece is constructed of two pieces of sheet metal 9 and 10, (shown in Figs. 2 and 3, respectively,) each stamped from a single piece of sheet metal, as tin, both having the flat flanges 11 extending in the plane of the tube, and the former, in addition, the flanges 12 extending at an angle from the flanges 11 and adapted, when the sections are brought together with the flanges 11 in contact, to be turned down, making a seam, such as shown particularly in Fig. 4. The central or depending tubular portion of the top piece is of greater capacity than the horizontal tube in order that it may supply the heated air and products to the side tubes in sufficient quantity to support combustion at the burner.

A telescopic connection between the upper elbows of the side tubes and the upper horizontal tube is formed by reducing the ends of the latter to pass in the ends of the side tubes and forming the shoulder 14 thereon, against which the ends of the side-tube elbows abut, (see Fig. 5,) thereby not only making a smooth joint in the tube, which will not obstruct the passage of the air from the central to the side tubes, but also taking the thrust from the upper portions of the side tubes when the latter are drawn together by the handle or bail 15, the ends of which are connected directly to said side tubes below their upper ends, as shown in Fig. 1. This construction gives the lantern great strength, and when the lantern is carried or swung by the bail or handle the tendency will be to draw the parts more firmly together, so that whether

or not the solder in the joint between the horizontal and side tubes holds firmly there is no liability of the frame pulling apart in use, this being an important feature, as lanterns of this type are generally subjected to hard usage.

The bell or canopy 16 of the lantern slides loosely upon the central tube, is provided with the globe-holding spring 17, and connected with the globe-supporting plate 18 by the side wires 19, pivotally connected to the bell and rigidly with the plate, said wires 19 being guided by the eyes 20 on the side tubes and the globe 21 being protected by the guard 22, preferably rigid with the plate 18.

The globe-frame, composed of the plate, bell, and side wires, may be of any suitable construction and vertically movable by any suitable means to facilitate lighting or trimming the wick.

It will be noted that the only soldering required in forming the tubular frame is that between the upper ends of the elbows of the side tubes and the ends of the horizontal tube and the small amount required to secure the lower ends of the side tubes to the oil-pot, so that the forming operations are accomplished by machinery and the assembling can be done by unskilled workmen.

I claim as my invention—

1. In a tubular lantern, the combination with the oil-pot and the side tubes having the upper and lower elbows thereon, of the top piece embodying the upper horizontal tube and the central depending tube, the ends of the horizontal tube being rigidly secured to the upper elbows of the side tubes the bell sliding on the central tube, and the bail or handle connected directly to the upper ends of the side tubes.

2. In a tubular lantern, the combination with the oil-pot, and the side tubes having the upper and lower elbows thereon, of the top piece embodying the upper horizontal tube, and the central tube, the ends of said horizontal tube telescoping with and rigidly secured to the upper ends of the side tubes above the elbows, the bell sliding on the central tube and the bail or handle connected directly to the upper portions of the side tubes.

3. In a tubular lantern, the combination with the oil-pot and the side tubes having the upper and lower elbows thereon, of the top piece embodying the upper horizontal tube and the central tube the horizontal tube having the reduced ends said top piece formed of the two sheet-metal sections connected by the seams at the sides extending in the plane of the tubes, said reduced ends fitting in the side tubes and rigidly secured thereto the bell sliding on the central tube and the bail connected directly to the upper portions of the side tubes.

4. In a tubular lantern, the combination with the oil-pot, and the side tubes embodying the upper and lower elbows and each composed of two pieces of sheet metal united by seams extending on the outer and inner sides in the plane of the elbows, of the top piece embodying the horizontal and vertical tubes, and composed of the two sheet-metal sections united by seams extending in the plane of the tubes, the ends of the horizontal tubes being reduced to enter the upper elbows of the side tubes and rigidly secured thereto, the bell sliding on the central tube and the bail or handle connected to the side tubes.

CHARLES T. HAM.

Witnesses:
JAMES BARNES,
GEO. W. HAM.