

(No Model.)

O. W. SWIFT.  
CARRIAGE LAMP.

No. 304,677.

Patented Sept. 2, 1884.

Fig. 1

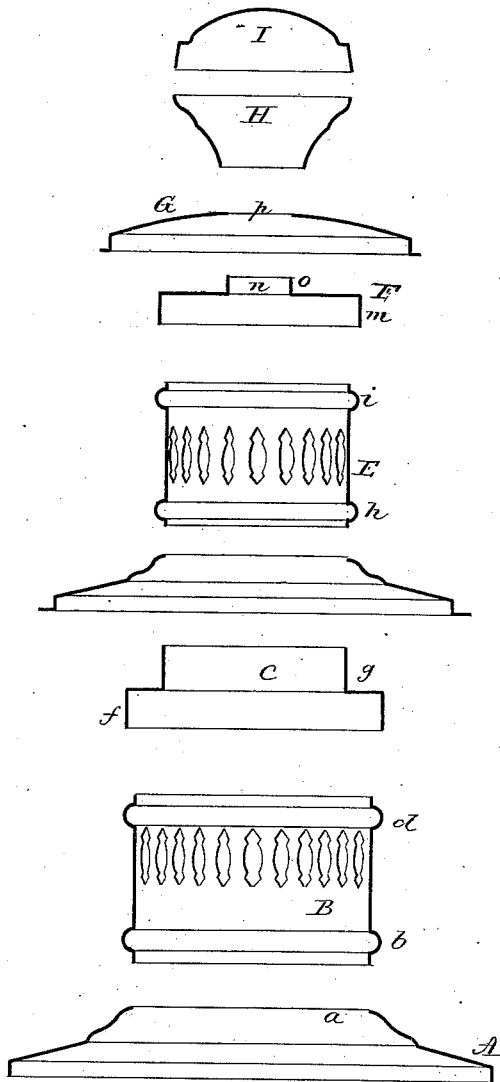
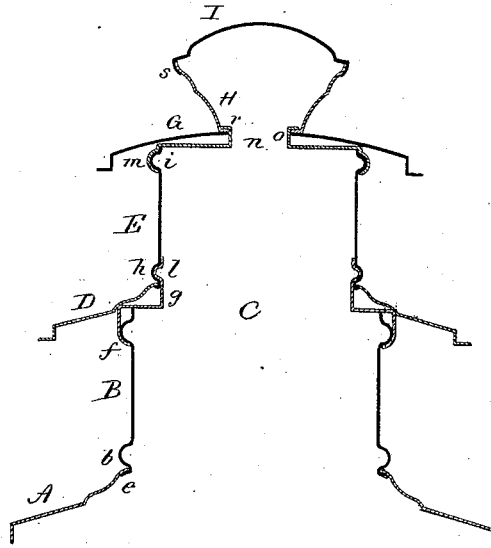


Fig. 2



Witnesses.  
*John H. Murray*  
*John C. Earle*

*Orrin W. Swift*  
Inventor.  
*By atty*  
*Chas. C. Earle*

# UNITED STATES PATENT OFFICE.

ORRIN W. SWIFT, OF NEW HAVEN, CONNECTICUT.

## CARRIAGE-LAMP.

SPECIFICATION forming part of Letters Patent No. 304,677, dated September 2, 1884.

Application filed November 3, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, ORRIN W. SWIFT, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Carriage-Lamps; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, the vertical sections of the several parts of which the top is composed; Fig. 2, the same parts united.

This invention relates to an improvement in the manufacture of carriage-lamps, with special reference to the top part. In the usual construction of this class of lamps the top part has been made in sections secured by solder. The heat generated within the lamps is often sufficient to melt the solder, so as to permit the separation of the parts. Again, in such lamps as are used only for ornamentation, unless more than ordinary care is used in soldering, the parts frequently separate. In some cases a clamping device has been applied within the top to hold the upper or capping section to the lower section, and so as to clamp the intermediate parts between. These devices are expensive, and are liable to disengagement quite as much as in the case of solder.

The object of my invention is to overcome these difficulties; and it consists in the construction of the top part of the lamp, as more fully hereinafter described, and particularly recited in the claim.

In the illustration I show a top composed of two sections.

A represents the top of the body of the lamp. This is struck from sheet metal in the usual manner of striking up this part of the lamp. Through its center is an opening, *a*.

B is a tubular piece, which forms the body of the first section. This may be circular or polygonal in transverse section, or any desired shape. The hole *a*, however, in the top A should correspond to the shape of the lower end of this tubular part B. This part B is constructed with an annular bead, *b*, near its lower edge, and with a corresponding bead, *d*, near its upper edge. The lower end of this

part B enters the hole *a* in the part A until the bead *b* comes to a bearing thereon, as seen in Fig. 2, the lower end of the part B extending below the inner surface of the part A like a flange, and this flange is turned up against the inner side of the part A around the hole *a*, as at *e*, Fig. 1. As successive sections require to be reduced in order to give a symmetrical appearance to the lamp, the next part, C, is a ring struck from sheet metal, its lower portion, *f*, corresponding in diameter to the bead *d*. Above this portion *f* the ring is constructed to form a flange, *g*, of smaller diameter. This part C is set on over the part B, the edge of the flange *g* passing down below the bead *d*. Then that edge is spun down around the bead, as seen in Fig. 2, securing this reducing-ring C firmly to the first section. Over the smaller diameter or flange *g* of this part C the first deflector, D, is set, this deflector being of usual form, but constructed with a hole centrally through it corresponding to the flange *g*, and so that that flange will extend up through it and permit the deflector to rest upon the outer angle of the ring.

E is the second section, made by preference substantially like the first section, B, except that it is smaller in diameter. Near its lower end is an annular bead, *h*, and near its upper edge a like annular bead, *i*. The internal diameter of this section E corresponds substantially to the external diameter of the flange *g*, the flange *g* extending up above the bead *h*, and when set together, as seen in Fig. 2, the lower end of the section E bears upon the top of the deflector D and the flange *g* extends up inside the bead *h*. Then the flange *g* is spun from the inside into the bead, as seen at *l*, thus not only securing the section E to the section B, but also securing the deflector D in its place.

F is the cap for the top, which consists of a disk having a downwardly-projecting flange, *m*, around its edge, its internal diameter corresponding to the external diameter of the bead *i*, and so as to be set over the upper end of the section E, as seen in Fig. 2, and when so set the flange is spun down over the bead *i*, as seen in Fig. 2. This cap F has a small opening, *n*, at its center, with an upwardly-turned flange, *o*, around it. Upon this cap the upper deflector, G, is set, it having a central open-

ing, *p*, through it to pass down over the flange  
*o*, as seen in Fig. 2. Over this flange *o*, which  
 projects above the deflector *G*, the lower cup  
 portion, *H*, of the tip ornament is set, and so  
 5 as to rest upon the top of the deflector *G*. Then  
 the upper edge of the flange *o* is turned over  
 upon the bottom of the cup around the open-  
 ing, as at *r*, Fig. 2, thus securing the part *H*  
 10 of the tip to its section, and at the same time  
 securing the upper deflector, *G*. Then upon  
 the tip the cap *I* is placed, the flange around  
 its edge spun down onto the lower part, as at  
*s*, Fig. 2. By this construction, therefore, the  
 whole upper part of the lamp is firmly secured  
 15 together by the simple process of spinning,  
 and without the use of solder, and any separa-  
 tion of the parts is impossible under ordi-  
 nary usage. In some cases only a single sec-  
 tion is required for the top of the lamp. In  
 20 that case the part *C* is made like the part *F*—  
 that is, the upwardly-projecting flange *g* is  
 contracted or made of a size corresponding to  
 the tip to be attached. These flanged connect-  
 ing and reducing rings are cheap in construc-  
 25 tion, being simply struck from sheet metal.  
 The spinning operation by which they are con-  
 nected to the respective sections or parts is  
 simple and cheap, and thus constructed the  
 lamp costs no more than the usual construc-  
 30 tion where solder is employed. It will be un-

derstood the sections *D E* are perforated for  
 the escape of the products of combustion or  
 for ventilation of the lamp. If more than two  
 sections like *B E* are required, such additional  
 sections are applied by the employment of re- 35  
 ducing or connecting rings *C*, made with flanges  
 of corresponding diameter.

I claim—

In a carriage-lamp, the top section, *B*, con-  
 structed with an annular bead, *b*, near its lower 40  
 edge, the end of the section below the bead  
 passing through a corresponding opening in  
 the top *A*, with the edge turned back upon the  
 top, to clamp the edge around the opening in  
 the top between the bead and such turned- 45  
 over edge of the section *B*, the said section *B*  
 also constructed with an annular bead near its  
 upper end, combined with a flanged reducing-  
 ring, one of the flanges embracing the bead at  
 the upper end of the section, the other extend- 50  
 ing through the deflector, and secured to the  
 top part above by the edge of the flange on  
 the ring, which extends therein, and whereby  
 the top portion and deflector are secured upon  
 said ring, substantially as described.

ORRIN W. SWIFT.

Witnesses:

JOHN E. EARLE,  
 LILLIAN D. KELSEY.