

F. S. CARR.
CARRIAGE CURTAIN FASTENER.
APPLICATION FILED OCT. 20, 1908.

942,612.

Patented Dec. 7, 1909.

Fig. 1.

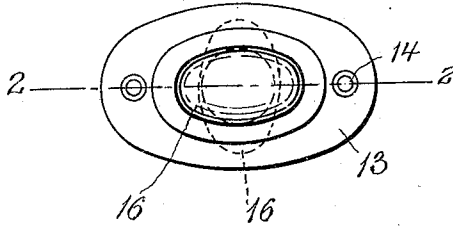


Fig. 2.

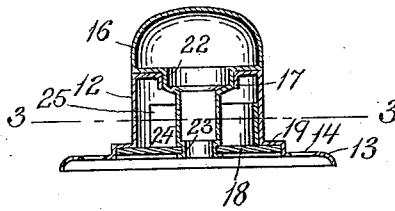


Fig. 3.

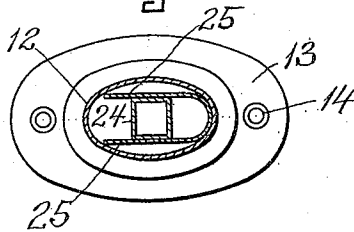
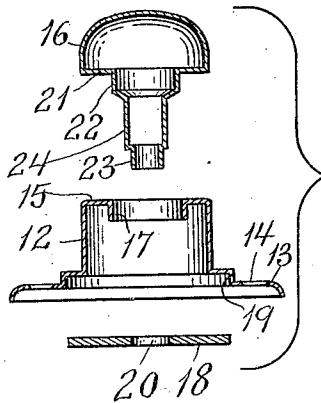


Fig. 4.



WITNESSES.

P. M. Pezzetti
J. R. Rouletone

INVENTOR.

F. S. Carr
by Hugh Brown Quincy May
Attorney

UNITED STATES PATENT OFFICE.

FRED S. CARR, OF BROOKLINE, MASSACHUSETTS, ASSIGNOR TO CARR FASTENER COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MAINE.

CARRIAGE-CURTAIN FASTENER.

942,612.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRED S. CARR, of Brookline, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Carriage-Curtain Fasteners, of which the following is a specification.

This invention relates to a fastener for carriage curtains, and comprises a shank adapted for attachment to a support such as one of the bars or members comprising the frame of a carriage top, the shank being formed to pass through an elongated eye in a buttonhole formed in a carriage curtain, and a head or button rotatively engaged with the shank and adapted to be turned to a position parallel with the shank to pass with the latter through the buttonhole, and to a position at right angles with the shank so that its end portions will overhang the sides of the shank, and the corresponding portions of the margin of the buttonhole and prevent the removal of the curtain from the shank, the shank and head being so formed that when the head is in one position the buttonhole can be readily moved onto and off from the head and shank, and when the head is in another position, it will prevent the removal of the curtain from the shank.

The invention has for its object to provide a device of this character adapted to be constructed mainly or wholly of sheet metal without the employment of castings and at a minimum expense.

The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification,—Figure 1 represents a plan view of a carriage curtain fastener embodying my invention. Fig. 2 represents a section on line 2—2 of Fig. 1. Fig. 3 represents a section on line 3—3 of Fig. 2. Fig. 4 represents in section the shank, the head, and the bottom plate, forming the principal parts of my improved fastener, disconnected from each other.

The same reference characters indicate the same parts in all the figures.

My improved fastener comprises a base member having a hollow shank 12 which is preferably elliptical in cross section, as indicated in Figs. 1 and 3. Said shank is adapted at its inner end to be attached to a

portion of a carriage top, the shank being preferably provided for this purpose with a flange 13 having screw holes 14. The outer end of the shank has a flat face 15 on which the head or button 16 bears and is adapted to rotate. A portion of the material of the shank is turned inwardly to form a cylindrical outer bearing 17 projecting inwardly from the flat face 15, and surrounded thereby.

18 represents a bottom plate, the margin of which bears upon a recessed seat 19 formed in the inner portion of the base member, said bottom plate being provided with a circular orifice 20 which constitutes an inner bearing in alinement with the outer bearing 17 and of smaller diameter than the latter.

The fastener also comprises a movable member which includes a head 16 provided with a flat inner face 21 adapted to bear on the face 15 of the shank, and a stem projecting inwardly from said face, said stem having an outer journal portion 22 adapted to rotate in the outer bearing 17, an inner journal portion 23 of smaller diameter than the portion 22 and adapted to rotate in the inner bearing 20, and an intermediate spring-engaging portion 24 which is preferably of square or other suitable polygonal form in cross section, as indicated in Fig. 3.

In assembling the above described parts, the bottom plate 18 is applied to the seat or recess 19, and the stem of the movable member is then inserted in the hollow shank until the inner face 21 comes to a bearing on the outer end of the shank, the journal portions 22 and 23 at the same time entering the outer and inner bearings 17 and 20. The inner end portion of the inner bearing 23 is then spread or upset sufficiently to engage the under side of the bottom plate, this operation inseparably connecting the said parts so that the bottom plate 18 cannot be withdrawn from the base of the shank 12, and the movable member cannot be withdrawn from the base member. The shank stem is, however, free to rotate in the bearings 17 and 20 so that the head may be turned either to the position shown by full lines in Figs. 1 and 2, or to the position shown by dotted lines in Fig. 1. The base of the head 16 has the same form as the cross section of the shank 12 so that when the head is in the position shown by full lines in Fig. 1, it coincides with the shank so that a buttonhole

in a carriage curtain may be passed freely over the head and onto the shank. When the head is in the position shown by dotted lines in Fig. 1, its major axis is at right angles with the major axis of the shank, so that the ends of the head overhang the sides of the shank and a portion of the carriage curtain buttonhole engaged therewith to prevent the removal of the curtain from the shank.

The head may be held yieldingly in either of the positions above described so that it will not be liable to accidental displacement, by means of spring arms 25, which are preferably parts of a U-shaped spring, inserted in the hollow shank 12, and confined therein between the flange 15 and the bottom plate 18. The arms 25 normally spring inwardly against the polygonal portion 24 of the stem, the arrangement being such that when said arms bear squarely on two opposite flat sides of said portion, the head is held thereby either in the full line or dotted line position shown in Fig. 1. The pressure of the spring arms is sufficient to prevent any loose or accidental movement of the head from one position to the other. When pressure is applied by the operator to the head to turn the same, the spring arms yield and permit the button to be readily moved from one of the described positions to the other.

It will be seen that the base member and the movable member are adapted to be conveniently and economically manufactured from flat sheet metal blanks by the use of suitable dies. Each of said parts is approximately cup-shaped. The base member may be formed by cupping a flat blank, the mouth of the cup being enlarged to form the flange 13 and recess 19, while the bottom of the cup is flattened to form the face 15, and opened and flanged to form the bearing 17. The movable member may be also formed by cupping a flat blank, the bottom of the cup being left closed to form the head 16 and its outer portion contracted to form the

face 21, the outer journal portion 22, the polygonal portion 24, and the inner journal portion 23, the formation of these parts involving successive contractions of the outer portion of the cupped blank. The bottom plate 18 is a flat sheet metal piece adapted to be formed by a single operation.

The described sheet metal construction enables the fastener to be produced at a relatively small expense as compared with fasteners, the principal parts of which are castings.

I claim:

A curtain fastener comprising inseparable base and head members the adjacent portions of which are oval in transverse section, the base member being hollow and composed of a sheet metal cup the bottom portion of which has a flat seat, and an outer bearing surrounded by said seat, while its body portion has an attaching flange and a recess surrounded by said flange, a bottom plate seated in said recess, and provided with an inner bearing, the head member being composed of a sheet metal cup the bottom portion of which constitutes a head, while the body portion is contracted to form an inner face formed to bear on the said flat seat of the base member, and an integral hollow stem inseparably connected to said bottom plate and having outer and inner journal portions formed to engage the said outer and inner bearings, and an intermediate polygonal spring-engaging portion, the inner end of the stem being rotatably engaged with said bottom plate, and a spring located within the hollow base member and bearing against the polygonal portion of the stem to yieldingly hold the stem and head with their adjacent oval portions in alignment or at an angle to each other.

In testimony whereof I have affixed my signature, in presence of two witnesses.

FRED S. CARR.

Witnesses:

C. F. BROWN,
E. BATCHELDER.