No. 761,592.

E. LIPPITT.
FRAME FOR INCANDESCENT MANTLES.
APPLICATION FILED NOV. 16, 1903.

PATENTED MAY 31, 1904.

Fig. 5.

Fig. 6.

Fig. 7.

Fig. 8.

Witnesses:

Inventor:

By: Edison Bros.

attorneys
FRAME FOR INCANDESCENT MANTLES.


Application filed November 16, 1903, Serial No. 131,384. (No model.)

To all whom it may concern:

Be it known that I, ELIHU LIPPITT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Frames for Incandescent Mantles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to frames for mantles used in connection with gas-burners and adapted to be impregnated with mineral substances which become incandescent upon being heated, the object of the invention being to provide a mantle of this class which is formed of knitted fabric fashioned in the fabrication, provided with a dome portion in the fabrication of which a stitch is employed which contracts as it leaves the needles more than the stitch employed in fabricating the body portion, a further object being the reinforcement of the head by the employment of more material in its fabrication than is used in the body.

A still further object is a reinforcement of the bail-thread-holding stitches.

These objects are attained in the construction hereinafter described, and illustrated in the accompanying drawings, in which

Figure 1 is an enlarged detail of the fabric.

Fig. 2 is a sectional view of the portion shown in elevation in Fig. 1. Fig. 3 is an elevation of the mantle-frame as fabricated and before the bail-cord is drawn up and secured. Fig. 4 is an elevation of the mantle-frame when completed. Figs. 5 and 6 are details of another form of stitch, and Figs. 7 and 8 are details of still another form of stitch.

The mantle is knitted in circular form and preferably upon a circular-knitting machine. In the construction shown in Figs. 1 and 2 the body portion 10 of the mantle is of plain knitted fabric, and the neck or dome portion 11 is of ribbed knitted fabric. By thus knitting the body portion plain or unribbed ample material is provided for carrying the mineral by means of which the illumination is secured, yet while employing a minimum amount of thread. The ribbed fabric employed in forming the dome of the mantle-frame involves the use of more thread in forming the stitch, and hence insures greater strength. Furthermore, the stitch is stretched in the fabrication more than the stitch employed in plain knitting, so that as it leaves the needles it contracts sufficiently to draw in the fabric, as indicated in Fig. 3. By this means the dome-shaped head of the mantle-frame, as shown in Fig. 4, is better secured and without material puckering or creasing, while the head of the mantle, which is the portion most liable to rupture, is materially increased in strength by reason of the employment of more material.

While I regard the combination of the plain stitch for the body and the ribbed stitch for the dome as securing the best results, any combination involving the employment of a main contractile stitch in the head than is used in the body will come within the scope of the invention. For example, the stitches shown in Figs. 5, 6, 7, and 8 may be employed. In all of these figures the head is shown as formed of the ribbed stitch, while the body is fabricated in the construction of Figs. 5 and 6 of what is known in the knitting art as the "tuck" stitch and in the construction of Figs. 7 and 8 as the "triple" stitch.

In forming the last row of stitches at the top of the mantle a plurality of loops are employed in each stitch, as shown at 13, 14, 15, and 16, and these stitches being cast off in opposite directions upon the stitches of the next lower row, as shown at 15 and 16, there results a set of loops at the top marginal edge, each of which is composed, as shown, of three turns of the thread. The bail-cord 17, shown as comprising two strands, is located within these reinforced marginal loops. The bail-cord may be either drawn through these loops after the fabrication of the mantle is completed or may be incorporated therein during the knitting operation by laying the thread down upon the next to the last row of stitches before the last row is cast off in a manner which will be well understood by those skilled in the art of knitting. The bail-cord 17 is of sufficient length, so that it completely encircles the mantle-frame when the end of the latter is open, as shown in Fig. 3, its ends


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projecting somewhat from the fabric. The bail is formed of this cord 17 by using the latter first as a draw-string to contract the upper end of the mantle-frame to the form shown in Fig. 4 and then carrying the ends of the cord across the open end of the frame and securing them in the fabric in any desired manner—as, for example, by the use of a crochet-hook.

The described construction secures a light and inexpensive mantle-frame, the body of which will carry an ample quantity of incandescent material, the dome of which will be shapely and of sufficient strength to support the body without danger of fracture and the bail-cord of which will be secured by a sufficient number of stitches to insure ample strength, while the manufacture is accomplished at an extremely small cost because the operations may all be made automatic, with the single exception of the drawing up of the bail-cord and securing of its ends.

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

1. A knitted mantle-frame, the body of which is formed of a plain knitting-stitch and the dome of which is formed of a ribbed stitching.
2. A knitted mantle-frame having its dome formed of a ribbed stitching, the last row of stitches each comprising a plurality of loops, and a bail-cord located within the last-named loops.
3. A knitted mantle-frame having each stitch of its top row of stitches formed of a plurality of loops, and a bail-cord passing through the last-named loops and having its ends carried across the open end of the mantle-frame and secured to the fabric.
4. A knitted mantle-frame, having its body portion and its dome or head portion formed of differing stitches, the stitches of the head portion relatively more contractile than the stitches of the body portion.

In testimony whereof I affix my signature in presence of two witnesses.

ELIHU LIPPITT.

Witnesses:

JAMES TIPPITT,
Geo. A. Hutchinson.