No. 11,108. PATENTED JUNE 20, 1854.

J. ALLENDER.

METALLIC GROMET.

Fig: 1.

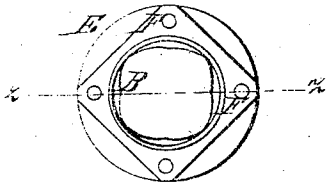


Fig: 2.

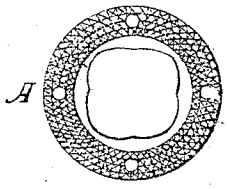


Fig: 3.

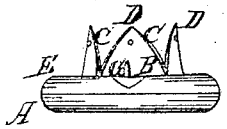


Fig: 4.

Fig: 5.

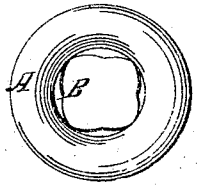


Fig: 6.

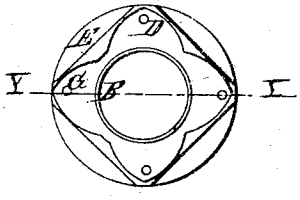
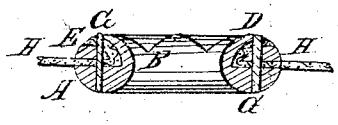


Fig: 7.



UNITED STATES PATENT OFFICE.

JOHN ALLENDER, OF NEW LONDON, CONNECTICUT.

METALLIC GROMET.

Specification of Letters Patent No. 11,108, dated June 20, 1854.

To all whom it may concern:

Be it known that I, JOHN ALLENDER, of New London, in the county of New London and State of Connecticut, have invented certain new and useful Improvements in Gromets; and I do hereby declare that the same are described and represented in the following specifications and drawings.

To enable others skilled in the art to make and use my improvements I will proceed to describe their construction and use, referring to the drawings, in which the same letters indicate like parts in each of the figures.

Figure 1 is a plan of the gromet complete ready for insertion. Fig. 2, is a plan without the collar or ring. Fig. 3, is an elevation. Fig. 4, is a section through the line Z Z of Fig. 1. Fig. 5, is the reverse of Fig. 2. Fig. 6, shows the gromet after it is inserted in the canvas or cloth. Fig. 7, is a section of Fig. 6 through the line Y Y.

In these drawings A is a ring, round on one side and flat on the other, with a tube B extending upward from its inner edge, which tube is scored across its upper end as represented at C C, and the points D D reduced in thickness as they extend up and at the top end.

E is a ring similar to it, (except the tube). The hole in it should be as much larger than the tube B as the thickness of the cloth or material into which the gromet is to be inserted. The ring E has four scores F F on its rounded side, which are made to correspond or nearly so with the points D when they are bent over into the scores F, as represented in Fig. 6. The flat sides of the rings A and E may be grooved and scored as represented in Fig. 2 or otherwise so as to make them hold the cloth firmer when they are brought in contact with it. The points G G may be made upon or inserted into the ring A so as to extend through the cloth into the ring E, and through it if it should be desirable, so as to rivet down the points D D, as represented in Figs. 6 and 7, to hold the parts of the gromet together more firmly and make it grip the cloth with a stronger grasp. To insert these gromets in the cloth I cut a slit as long as the diameter of the hole in the ring E, so as to sever the threads of warp, and a similar slit across it (the first slit) and at a right-angle to it, so as to sever the threads of weft; and lay the ring E upon the cloth and press the cloth and ring down onto the tube B and ring A so that the points D D of the tube will correspond with the points of the cloth formed by cutting the slits, the points G perforating the cloth at the same time and passing up through the ring E, so that when the points D D are bent over and swaged down into the scores F F they carry the points of the cloth with them and confine it firmly, as represented in Fig. 7, where H H represents a section of the cloth, and as the points D D are swaged down, the points G G enter the holes in the points D D and pass through them so that the points G may be riveted so as to hold the points D and bind the cloth firmly in the gromet as well as to hold the parts of the gromet together. I contemplate that these gromets may be made and used very successfully without scoring or otherwise roughening the flat sides of the rings A and E, and also without the points or rivets G G if the tube B and points D are made thick enough to hold the parts together firmly when they are properly swaged down.

In the metallic gromets heretofore made there has been no provision made for turning over the corners of the cloth when they were inserted. These gromets consisted of two rings punched out of sheet metal the interior of the ring being swaged, so as to form a short tube upon the ring and the tube upon one ring being made of a proper size to fit the interior of the tube of the other ring. When they were inserted a round hole was cut in the cloth the size of the largest tube which is inserted and swaged down upon the cloth; then the small tube is inserted in the opposite direction and swaged down upon the ring of the large tube. Now as these gromets are made of thin sheet metal they do not grip the cloth very firmly and when much force is applied to the sail or cloth it tears readily and with comparative ease to what it would if my improved gromet were used and the corners of the cloth secured as above described; hence the advantage of my gromets over others; and it is this advantage which makes them so vastly superior to all others heretofore made.

What I claim as my invention and desire to secure by Letters Patent, is—

1. Making that portion of the tube put

through the ring to correspond or nearly correspond with the corners of the canvas or cloth so that when they are bent down upon the canvas, they double or bend it over the edge of the ring and confine it firmly substantially as described for the purposes set forth.

2. Is the scores in the ring which correspond or nearly correspond with the corners of the cloth and with the points of the tube, in combination with the points of the tube aforesaid substantially as described.

3. Is scoring or otherwise roughening the surface of the rings where they come in contact with the cloth so as to make them hold the canvas firmer and better.

4. Is making or inserting points in or on one or both of the rings to extend through the canvas into the opposite ring or otherwise.

5. Is riveting the points of the tube which are bent over on the cloth or otherwise substantially as described.

JOHN ALLENDER.

Witnesses:
WILLIAM CLARK,
HENRY BERKERWOOD.