

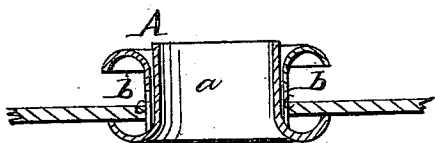
*J. W. Norcross.*

*Sail Grommet.*

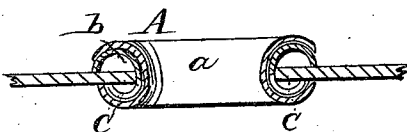
*N<sup>o</sup> 84,900.*

*Patented Dec. 15, 1868.*

*Fig: 1.*



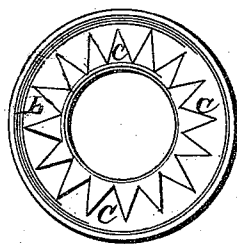
*Fig: 2.*



*Fig: 3.*



*Fig: 4.*



Witnesses:

*J. C. Keller*  
*E. F. Kastenhuber*

Inventor:

*Jos. W. Norcross*  
*per*  
*Van Santvoord & Knapp*  
*Attys*

# United States Patent Office.

JOSEPH W. NORCROSS, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 84,900, dated December 15, 1868; antedated November 30, 1868.

## IMPROVEMENT IN GROMMETS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOSEPH W. NORCROSS, of Boston, in the county of Suffolk, in the State of Massachusetts, have invented a new and useful Improvement in Sail-Grommets; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which drawing—

Figure 1 represents a central section of my grommet before it is clinched.

Figure 2 is a similar section thereof after it is clinched.

Figure 3 is a modification of the same.

Figure 4 is an inverted plan of a part thereof.

Similar letters indicate corresponding parts.

This invention relates to a grommet which is composed of two eyelets, one of which is placed in a reverse position over the other, and provided at the edge of its tube with spikes or points, in such a manner that by the act of clinching the grommet, the spikes or points turn up and bear firmly against the cloth, which is also held between the flanges of the eyelets.

The invention consists in a grommet composed of two eyelets, in combination with an additional flange, in such a manner that when the grommet is clinched, one of the eyelets is completely enclosed between the flange of the other eyelet and the additional flange, and that said eyelet is thus protected against the influence of the water or atmosphere, and consequently an eyelet of iron or other tough and cheap material can be used with advantage.

A represents a grommet, which is composed of two eyelets, *a b*, one of which is placed in an inverted position over the other, as clearly shown in fig. 1.

The tube of the eyelet *b* is provided, at its edge, with a series of teeth or spikes, *c*; and if the grommet is clinched, these spikes strike the inner concave sur-

face of the eyelet *a*, and thereby they are turned up and made to clinch the cloth, as shown in fig. 2.

The cloth is also clinched between the rims of the two eyelets, and a grommet is obtained, which has a double hold on the cloth, and which is of superior strength, its eye being composed of two tubes, one inside the other.

If desired, the eyelet *b* may be replaced by an eyelet, *b'*, as shown in fig. 3; and in this case I use an additional flange or cap, *c'*.

The eyelet *b'* is made of iron, or other tough and cheap metal, and it is clinched to the cloth independent of the eyelet *a*.

The eyelet *a* is then introduced, the flange or cap *c'* is put on, and, by clinching the eyelet *a*, the eyelet *b'* is completely enclosed between the flange of the eyelet *a* and the flange or cap *c'*.

By these means I am enabled to use, in a grommet, an eyelet made of iron or other tough and cheap material, which, when left unprotected, would soon corrode and be liable to injure the cloth.

By enclosing the iron eyelet between the flange of the eyelet *a* and the flange *c'*, said iron eyelet is protected against the corroding influence of the water or the atmosphere, and a grommet of superior strength and durability can be produced at a comparatively small expense.

Having thus described my invention,

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

The arrangement and combination of the eyelets *a b'* and additional flange or cap *c*, substantially as and for the purpose set forth.

J. W. NORCROSS.

Witnesses:

W. HAUFF,  
J. C. POLLER.