

(No Model.)

W. W. WILCOX.

SAIL GROMMET.

No. 304,249.

Patented Aug. 26, 1884.

Fig. 1.

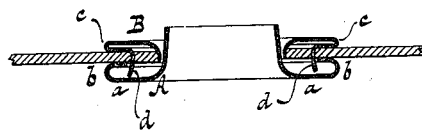


Fig. 2.

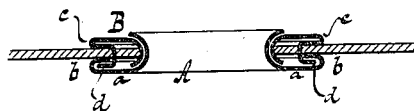


Fig. 5.

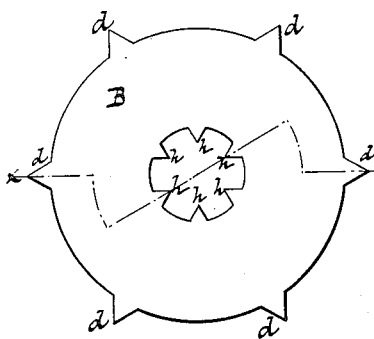


Fig. 3.

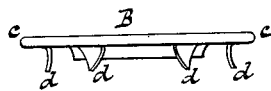


Fig. 6.

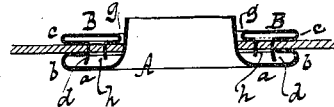


Fig. 4.

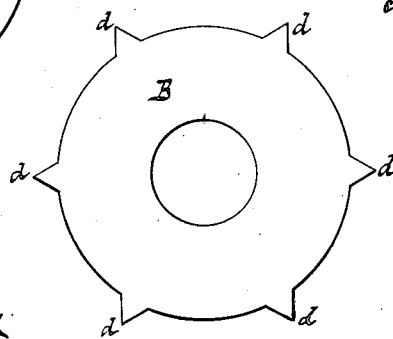
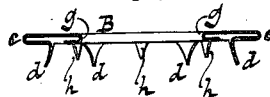


Fig. 7.



WITNESSES:

Otto Hufel and
J. A. Rutherford

INVENTOR

William W. Wilcox

BY

Van Santvoord & Haupt

ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIAM W. WILCOX, OF MIDDLETOWN, CONNECTICUT.

SAIL-GROMMET.

SPECIFICATION forming part of Letters Patent No. 304,249, dated August 26, 1884.

Application filed June 7, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. WILCOX, a citizen of the United States, residing at Middletown, in the county of Middlesex and State of Connecticut, have invented new and useful Improvements in Sail-Grommets, of which the following is a specification.

This invention relates to a grommet which is made entirely of sheet metal, the cap-plate being formed on its outer edge with a rolled rim and with spurs projecting from the inner edge of this rim, while the flange of the eyelet is also formed with a rolled rim, so that when the cap-plate is brought down upon the cloth supported by the flange of the eyelet the spurs of said cap-plate will penetrate the cloth at such a distance from the edge of the hole in the cloth that they will take a firm hold, and that the grommet is not liable to come off. The rolled rim of the flange of the eyelet is slightly open, so that the points of the spurs of the cap-plate can turn down beneath said rim. On the inner edge of the cap-plate is also formed a rolled rim with spurs to give additional hold to the grommet.

In the accompanying drawings, Figure 1 represents a central section of my grommet before the eyelet is clinched, the cap-plate being provided with spurs at its outer rim only. Fig. 2 is a similar section when the eyelet has been clinched. Fig. 3 is a side view of the cap-plate. Fig. 4 is a plan of the blank from which the cap-plate is made. Fig. 5 is a plan view of the blank used for forming a cap-plate with spurs at its inner rim as well as at its outer rim. Fig. 6 is a section of the grommet having both sets of spurs, the plane of section being indicated by the line *xx*, Fig. 5. Fig. 7 is a sectional detached side view of the cap-plate made from the blank shown in Fig. 5.

Similar letters indicate corresponding parts.

In the drawings, the letter A designates the eyelet with its flange *a*. This flange is provided with a rolled rim, *b*, which is slightly open, as shown in Figs. 1 and 2.

B is the cap-plate, which is made of sheet metal, and which, when provided with spurs at its outer rim only, is prepared from a blank such as shown in Fig. 4. The outer edge of this cap-plate is provided with a rolled rim, *c*, and from the inner edge of this rolled rim

project spurs *d*, and, if desired, the edge of the hole in the cap-plate may also be provided with spurs, as hereinafter explained. The eyelet is passed through a hole in the cloth C, so that the cloth rests upon the rolled rim of the flange *a*. The cap-plate B is then applied, so that its spurs *d* will penetrate the cloth, as shown in Fig. 1, and when the eyelet is clinched the spurs are also clinched, as shown in Fig. 2. By referring to this figure it will be seen that the spurs *d* penetrate the cloth at a distance from the edge of the hole in the cloth, so that they are enabled to take a firm hold of the cloth, and in order to allow the spurs *d* to clinch, the rim *b* of the flange of the eyelet is left slightly open, so that the points of the spurs can turn under the inner edge of said rim.

In order to give to the grommet additional hold, the inner edge of the cap-plate B may be provided with a rolled rim, *g*, (see Figs. 6 and 7,) and on this rolled rim are formed spurs *h*, which also penetrate the cloth, as shown in Fig. 6. The spurs *h* are, by preference, located on radial lines intersecting the spaces between the outer spurs, *d*, and they need not be quite so long as said outer spurs. By forming the spurs *h* on the inner edge of the rolled rim *g* these spurs are thrown off from the outer surface of the barrel of the eyelet a sufficient distance to enable the same to take a firm hold in the cloth, as indicated in Fig. 6. By these means a grommet is obtained which can be made comparatively cheap, and which, when properly applied to a sail, is not liable to come off.

I am aware that sail-grommets have heretofore been made provided with points projecting from the inner surface of the cap-plate or washer, and also from the inner surface of the flange of the eyelet, as described, for instance, in Patent No. 5,779, of September 19, 1848. In all cases known to me the parts composing the grommet were made of cast metal, which makes the article heavy, and, furthermore, the points, being situated close to the inner edge of the hole of the cloth, do not take a firm hold, neither do they readily clinch.

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

1. The combination, substantially as hereinbefore described, with the eyelet A and its

flange *a*, of a cap-plate, B, made of sheet metal, and provided with a rolled rim, *c*, and with spurs *d*, projecting from the inner edge of the rolled rim.

5 2. The combination, substantially as here-
inbefore described, with the eyelet A and its
flange *a*, formed of sheet metal, and provided
with an open rolled rim, *b*, of a cap-plate, B,
made of sheet metal, and provided with a rolled
10 rim, *c*, and with spurs *d*, projecting from the
inner edge of the rolled rim.

3. The combination, substantially as here-
inbefore described, with the eyelet A and its
flange *a*, of a cap-plate, B, made of sheet metal,
15 and provided on its inner edge with a rolled

rim, *g*, and spurs *h*, projecting from the inner
edge of the rolled rim.

4. The combination, substantially as here-
inbefore described, with the eyelet A and its
flange *a*, of a cap-plate, B, made of sheet metal, 20
and provided on its outer edge with a rolled
rim, *c*, and spurs *d*, and on its inner edge with
a rolled rim, *g*, and spurs *h*.

In testimony whereof I have hereunto set my
hand in the presence of two subscribing wit- 25
nesses.

WILLIAM W. WILCOX.

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.