

903,023.

Patented Nov. 3, 1908.

Fig. 1.

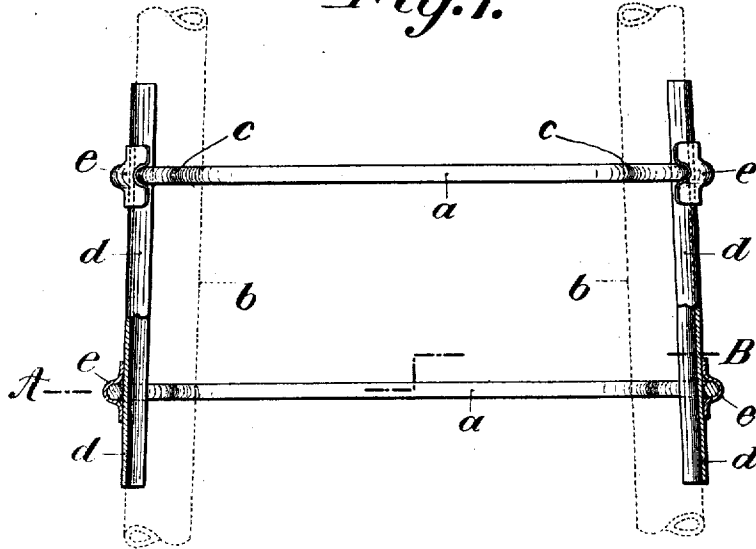
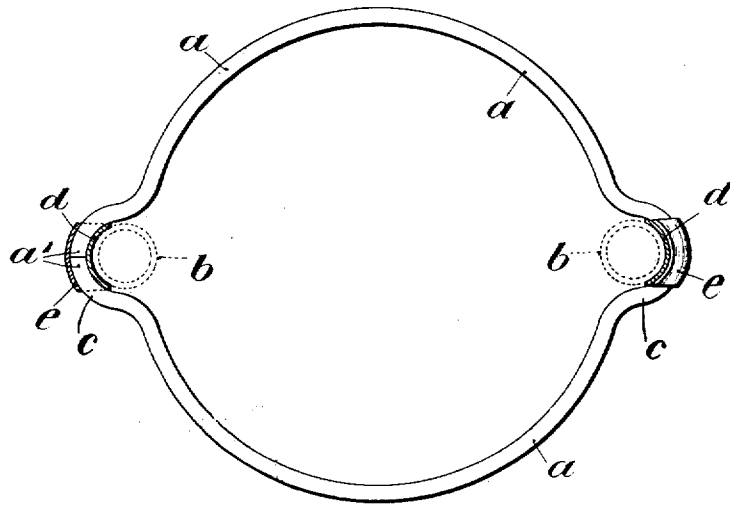


Fig. 2.



Witnesses.
[Signature]
Robert Condit.

Inventor.
Gustav Stübgen.
By *James L. Norrie*
[Signature]

UNITED STATES PATENT OFFICE.

GUSTAV STÜBGEN, OF ERFURT, GERMANY.

STORM-LANTERN.

No. 903,023.

Specification of Letters Patent.

Patented Nov. 3, 1908.

Application filed October 21, 1907. Serial No. 398,399.

To all whom it may concern:

Be it known that I, GUSTAV STÜBGEN, manufacturer, a subject of the King of Prussia, German Empire, residing at Erfurt, Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Storm-Lanterns, of which the following is a specification.

This invention relates to storm lanterns and particularly to an improved grating for the same, the said grating being of such shape that, when it is placed over the air-conducting pipes of the storm lantern, the grating bars always fit and slide thereon, and consequently the grating cannot be placed askew or in oblique position.

Hitherto the grating wires have been bent and secured by means of eyes, clamps or simply by soldering. When protecting gratings are formed in that manner, it frequently and readily occurs that in putting the protecting grating in position, the clamps, guides or the like are not placed over the air-conducting pipes, but get caught laterally next to the grating bars, whereby the protective grating fails to find a proper hold, and being forced against the glass chimney, breaks the same when shocks take place.

Unlike those gratings hitherto used, in the protective grating according to this invention the grating wire is bent to form a loop at the place where it is connected to the grating bar, which latter fits exactly into the arc of the loop. As in such arrangement there is no hollow space between the grating wire and the grating bar, the air-conducting pipes can no longer be caught in such hollow space, but are always caught by the loops of the grating wire.

A constructional form of the device according to this invention is illustrated in the accompanying drawing, in which

Figure 1 shows the grating in side elevation, partly in section, and Fig. 2 is a plan of one of the grating wires showing other parts in section along the line A—B of Fig. 1.

The grating wires *a* are bent as usual and at the point where they are destined to en-

gage the air-conducting pipes *b*, are bent to form a loop *c* the hollow of which corresponds to the arc of the grating bar *d*. When the grating is placed in position, it automatically advances so far that the air pipes *b* are caught by the grating bar *d* owing to the loop and thus the grating fits the air-conducting pipes.

The securing of the grating wires *a* to the grating bars *d* is effected by means of curved or arcuate clips *e* formed so as to suit the outer-diameter of the loop, and soldered to the grating wires *a* and grating bar *d*. These clips *e* at the same time cause a good and reliable connection of the ends *a*¹ of each grating wire *a* to each other, for as the ends *a*¹ of each wire *a* are also bent to suit the arc of the grating bar *d* and surrounded by the curved clips *e*, the said bent ends *a*¹ are held fast between *d* and *e*, and thus should the soldering yield or break, the ends *a*¹ cannot tear out. In that way the securing of the grating wires *a* to the grating bars *d* is thoroughly reliable.

What I claim is:

The combination with the air tubes of a storm lantern, of sliding bars applied against and extending longitudinally over the outer portions of the said tubes, each bar being provided with clips having central outstruck portions curved transversely with relation to the bars and forming inclosed seats and circular grating wires having outwardly projected semi-circular looped seats at diametrically opposite points extending through the clips and held by the latter against the outer side of the bars, the remaining portions of the wires being free of contact with relation to the air tubes and whereby the said wires may be positively moved with the bars on the air tubes.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GUSTAV STÜBGEN.

Witnesses:

PAUL TEISHMANN,
ERNST EBERHARDT.