

W. R. SMITH.  
VENTILATOR FOR FEED BAGS OR THE LIKE.  
APPLICATION FILED MAR. 23, 1912.

1,050,865.

Patented Jan. 21, 1913.

Fig. 1.

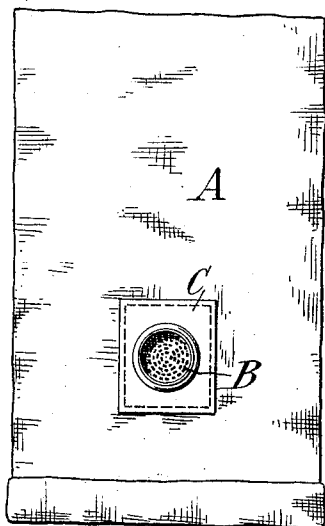


Fig. 2.

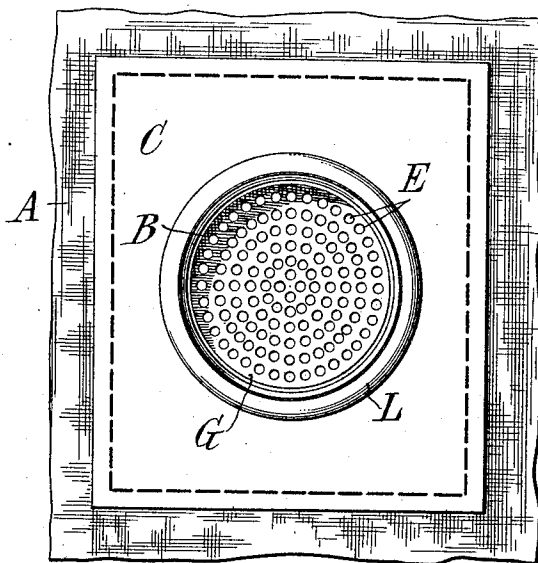


Fig. 3.

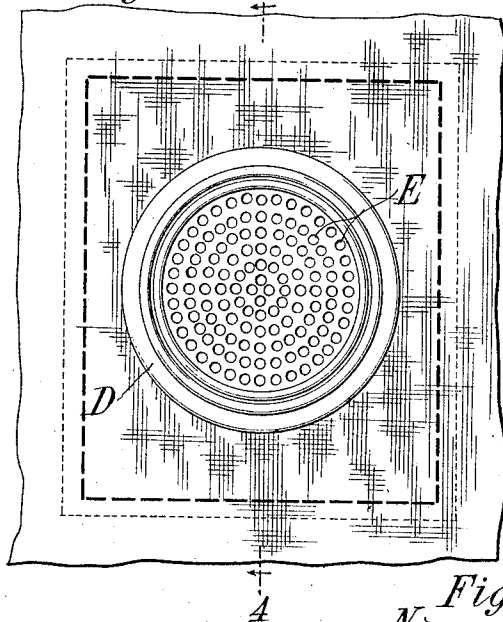


Fig. 4.

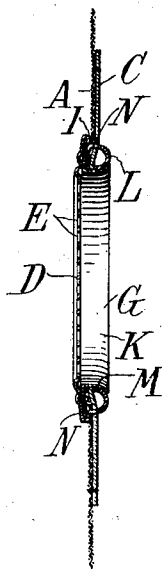


Fig. 6.

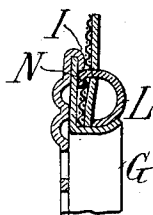
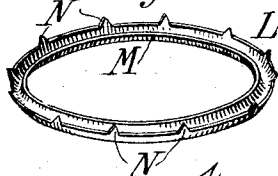


Fig. 5.



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# UNITED STATES PATENT OFFICE.

WILBUR R. SMITH, OF NEW YORK, N. Y., ASSIGNOR TO JOHN BOYLE & COMPANY, OF  
NEW YORK, N. Y., A CORPORATION OF NEW YORK.

VENTILATOR FOR FEED-BAGS OR THE LIKE.

1,050,865.

Specification of Letters Patent.

Patented Jan. 21, 1913.

Application filed March 23, 1912. Serial No. 685,838.

*To all whom it may concern:*

Be it known that I, WILBUR R. SMITH, a citizen of the United States, residing in the borough of Brooklyn, county of Kings, city and State of New York, have invented certain new and useful Improvements in Ventilators for Feed-Bags or the Like, of which the following is a specification.

This invention relates to ventilators for feed bags, nose bags or other similar articles, and aims to provide certain improvements therein.

It is customary to provide feed bags for horses with a ventilating aperture near the bottom thereof in order to provide suitable passages near the nostrils of the horse through which air may be inhaled and exhaled. Preferably such passages are numerous, and in order that the feed may be retained they are usually formed of a more or less closely woven wire net. Customarily this wire fabric has been cut in the form of a disk and secured by flanges carried by an annular sheet metal plate which is also provided with a flange extending through the aperture in the bag, a circular washer being placed over the flange and the latter turned or riveted over the washer. It is found in this construction that the wire netting is very apt to be displaced or pulled out from between the flanges in use, and that the washer on the exterior of the bag is liable to become separated from the fabric and work out of place, with the result that the ventilator often drops entirely out of the bag.

The object of the present invention is to provide a construction of ventilator in which the use of wire netting is avoided, and preferably in which means are provided for riveting or clenching the outer washer to the fabric in such manner that it is not liable to become separated from the bag.

The invention also includes other features of improvement which will be hereinafter more fully described.

Referring to the drawings, which illustrate one form of the invention,—Figure 1 is a side elevation of a nose bag having my improved ventilator therein. Fig. 2 is an enlarged view of the outer side of the ventilator. Fig. 3 is a similar view of the inside of the ventilator. Fig. 4 is a diametrical section of Figs. 2 and 3. Fig. 5 is a perspective view of the outer washer. Fig. 6 is an enlarged sectional view of a detail.

Referring to the drawings, let A indicate a feed bag of canvas or like material having a ventilator B which is located in an aperture formed in the bag, near the bottom thereof. Usually the aperture is reinforced by a piece of leather C or other suitable material.

According to the present invention instead of the ventilator proper being formed of a wire netting, it is formed of a plate of metal D which is provided with numerous holes E through which air may pass in and out of the bag. The holes E are of sufficiently small diameter to avoid the passage of feed from the bag. In the preferred construction the plate D is connected to a member G which is formed with a flange H over which the edges I of the plate are turned, so that the parts are securely connected. The member G is also provided with a flange K designed to pass through the aperture in the bag and reinforce, and being adapted to be turned outwardly to engage a washer L, the parts being in effect riveted together to secure the plate in position.

In Fig. 5 is shown a perspective view of the washer, which is generally semi-circular in cross-section, the inner edge of which M shown in Fig. 4 is designed to form a bearing surface for the out-turned edge of the flange K. The outer edge of the washer L is formed with a series of integral projections N which are designed to pass through the bag and reinforce, so as to prevent relative rotation of the washer and bag, and to avoid as far as possible a separation of the washer from the reinforce.

In the preferred form of my invention I so construct the washer and plate D that during the operation of assembling, the projections N, after passing through the fabrics, impinge against the edge I of the flange which is turned over upon the flange H of the member G. The edge I is preferably constructed so that it slants inwardly, whereby when the projections N strike its inner face during the act of assembling they will turn inwardly and clench to a certain extent along the surface of the bag A (see Fig. 6). Either in the same or subsequent operation the flange K of the member G is either swaged or spun outwardly so that it is riveted over the curved edge of the collar L. The result of this construction is that the plate D is firmly held in position in the

aperture of the feed bag, so that it is practically impossible for it to work loose. This effect is increased by the fact that the edge I of the plate is turned over the flange H, so that in practice the plate cannot bulge out without breaking. The collar, being clenched to the material at a large number of points, is firmly held against detachment therefrom, so that the knocks which the collar receives in use do not separate the collar from the fabric. In prior structures it has been found that when this occurs the collar is apt to turn and place a sufficient strain on the over-turned edge of the flange K to cause the collar to work off. In the present structure the collar is clenched against both outward and turning movements. Furthermore, in the construction shown there are no sharp edges on the interior or exterior which might injure either the horse or the user.

While I have shown and described a certain embodiment of the invention, it will be understood that I do not wish to be limited thereto, and various changes may be made therein without departing from the invention.

What I claim is:—

1. A ventilator for feed bags, comprising a perforated plate, an annular member having an outwardly projecting flange, and a washer, said perforated plate having its edge bent over and clamped against the underside of said outwardly projecting flange of

said annular member, said annular member being adapted to have its outer end expanded over said washer and to pass through an opening in a feed bag, and clamp the portions thereof surrounding said opening between said outwardly projecting flange and washer.

2. A ventilator for feed bags, comprising a perforated plate, an annular member having an outwardly projecting flange, and a washer, said perforated plate having its edge bent over and clamped against the underside of said outwardly projecting flange of said annular member, said annular member being adapted to have its outer end expanded over said washer and to pass through an opening in a feed bag, and clamp the portions thereof surrounding said opening between said outwardly projecting flange and washer, and said washer having projections adapted to pass through said portions of the bag and be turned inwardly by said inturned edge of said perforated plate and the underside of said outwardly projecting flange against the bag.

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

WILBUR R. SMITH.

Witnesses:

EUGENE V. MYERS,  
THOMAS F. WALLACE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."