Aug. 16, 1932. L. VAN HÜLST 1,871,827

BAG CONSISTING OF TWO LAYERS OF PAPER

Filed Aug. 21, 1930

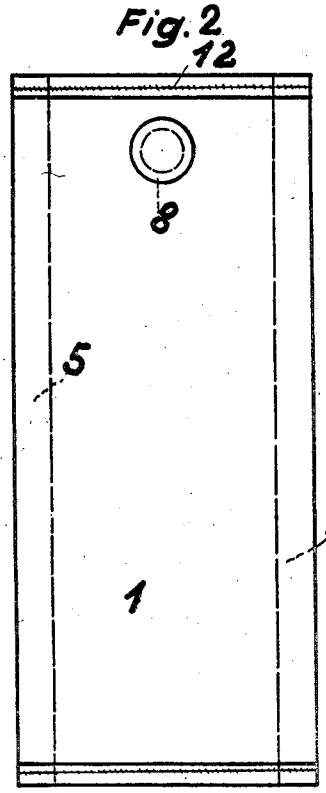


Fig. 2

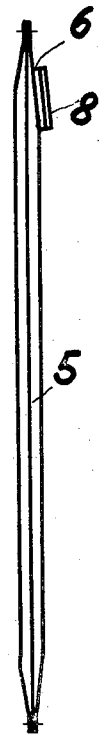


Fig. 3

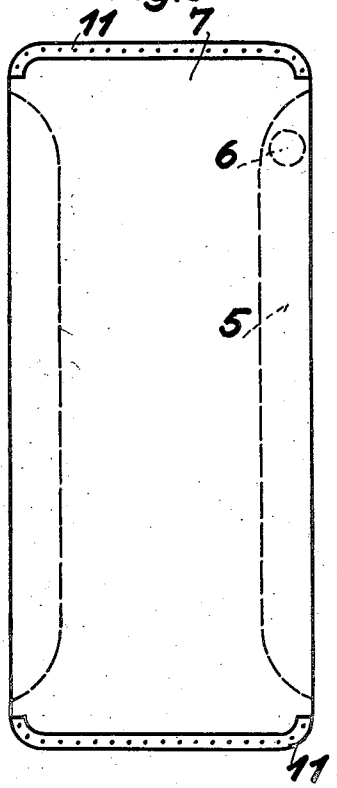


Fig. 5



Fig. 4

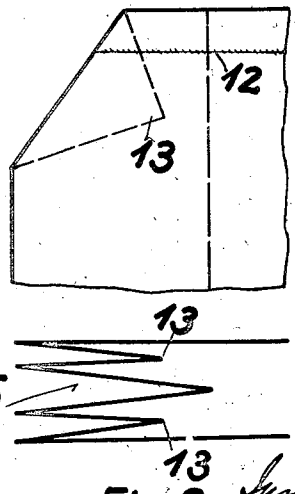


Fig 7

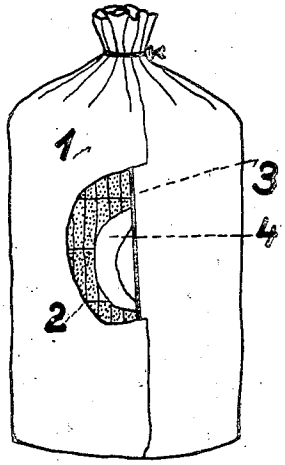


Fig. 1

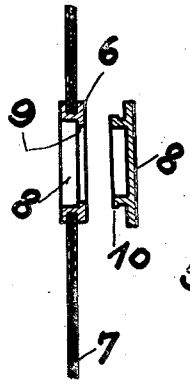


Fig. 6

Fig. 8

Inventor:
Laurens van Hülst
by Munn & Allen & Co
Attys

Patented Aug. 16, 1932

1,871,827

UNITED STATES PATENT OFFICE

LAURENS VAN HÜLST, OF MERSEBURG, GERMANY

BAG CONSISTING OF TWO LAYERS OF PAPER

Application filed August 21, 1930, Serial No. 476,929, and in Germany July 9, 1929.

For materials, which are hygroscopic and cause unhealthy dust, bags are used, which consist of two layers of paper and of a bituminous intermediate layer. Bags of this kind are impermeable to water as long as the intermediate layer is not damaged; they lose however this property as soon as the intermediate layer becomes cracked or broken. Bitumen without any reinforcement is very sensitive against shocks and breaks easily; it further possesses little resistance against tearing.

In order to obviate these defects wire, preferably wire gauze, is inserted in the intermediate layer of bitumen, according to the invention, the bag being thus rendered resistant against mechanical stresses. To the bitumen a solid hold is given by the wire insert so that it does no longer break. Only by the wire insert a really waterproof bag is obtained.

The wire insert does not in the least prejudice the suppleness of the bag, which can be folded easily and tied up at the upper end. The wire insert enables further to provide eyes or closure elements on the bag, and to solidly and airtightly connect them with the bag by folding over.

The unfilled bag, ready for use, may be closed, only a narrow filling hole being left open, which is framed by a ring similar to the eye of a shoe. The material, for instance cement, can be filled into the bag by blowing. The hole is tightly closed after the filling by a cover pressed into the ring of the eye.

This bag closure is readily and easily to be manipulated, and development of dust at the filling of the bag is limited to the minimum.

An embodiment of the invention is illustrated by way of example in the accompanying drawing in which:

Fig. 1 shows a paper bag of usual shape.

Figs. 2 to 4 show in elevation, top plan view and cross section, a bag of another shape.

Fig. 5 illustrates a modification of the bag shown in Figs. 2 to 4.

Fig. 6 shows in vertical section a closing device for the bag shown in Figs. 2 to 5.

Figs. 7 and 8 show in elevation and cross section respectively the left upper corner of a bag which is a slight modification of the bag shown in Figs. 2 to 4.

The bag is made of two layers of paper and of an intermediate layer of bitumen reinforced by wire gauze.

To show the several layers, i. e. the outer layer of paper 1, the intermediate layer 2, the wire gauze insert 3, and the inner paper layer 4, a portion of the bag shown in Fig. 1 is broken away.

The bag is produced by pasting, preferably by bottom pasting as commonly used in the manufacturing of paper bags or screws. This bottom pasting is simple and cheap and the bag according to the invention is distinguished by low cost of manufacture. The seam of the bag may be covered with a strip of paper pasted on, whereby the resistance of the bag is further increased.

The bag shown in Figs. 2 to 4 is sewn near the top and bottom and has two longitudinal pleats 5. The filling hole is framed by a ring 6 similar to a shoe eye and inserted in the wall 7 of the bag like a shoe eye in a shoe. The filling hole is closed after the filling by a cover 8 which ensures a tight closing, also a packing might be inserted. A bead 10 on the cover 8 grips behind a bead 9 of ring 6 so that the lid is securely held. Instead of the bead 10 on the cover wart-like projections may be provided.

The filling hole 6 may be arranged in one of the two pleats 5 (Fig. 5) as the upper end of the bag is preferably rounded and the pleats are not extended to the top end of the bag but tapered at the ends. In this manner the high tensions which might otherwise occur are avoided or at least considerably reduced. The bag shown in Fig. 5 is closed at the upper end and at the lower end by iron bars 11.

A cover might be arranged in the ring on the inner side of the bag adapted to close automatically.

Figs. 7 and 8 show that the seam 12 (Fig. 2) can be made much smaller by folding inwards the corners 13. Fig. 8 shows the bag in not sewn state.

The presence of the wire mesh in the bi-

tumen results in sub-dividing the bitumen layers into small reenforced portions and this is effective in preventing breaking of the bitumen or its disintegration.

I claim:

1. A bag consisting of two layers of paper, comprising an intermediate layer of bitumen, and a reinforcement of wire gauze embedded in said bitumen.

2. A bag consisting of two layers of paper as specified in claim 1 completely closed in the state ready for use with the exception of a narrow filling hole, a ring reinforcing the edge of said hole, and a cover adapted to be pressed into said ring to tightly close said hole.

3. A bag consisting of two layers of paper as specified in claim 1 rounded at the top and having two longitudinal pleats tapering at the upper end, completely closed in the state ready for use with the exception of a narrow filling hole in one of said pleats, a ring reinforcing the edge of said hole, and a cover adapted to be pressed into said ring to tightly close said hole.

4. A bag consisting of two layers of paper as specified in claim 1 having two longitudinal pleats tapering at the upper end the corners of the top end of the bag folded inwards, and a transverse seam near the top and the bottom end.

5. A bag formed of two layers of paper and an intermediate layer of bitumen containing wire embedded in the bitumen and dividing the bitumen into small reenforced areas.

6. A bag as specified in claim 5 having a filling ring with a seat for the reception of the material of the bag and the wire embedded therein.

In testimony whereof I affix my signature.

LAURENS VAN HÜLST.