July 4, 1950 F. H. BRUNNZELL 2,513,448

BAND-LIKE MATERIAL FOR PROTECTIVE COVERS

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Fig. 1

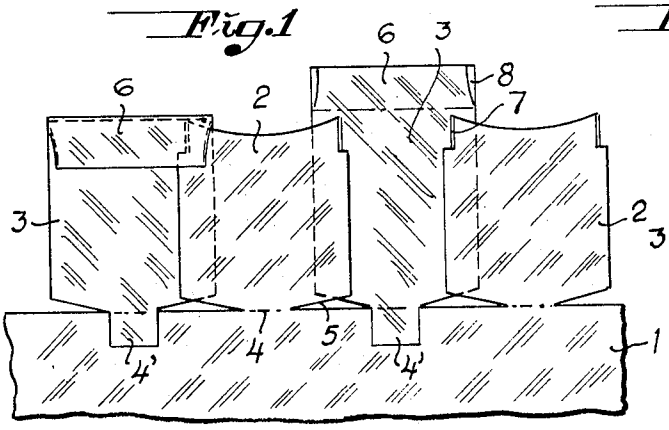


Fig. 3

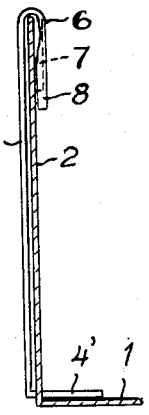
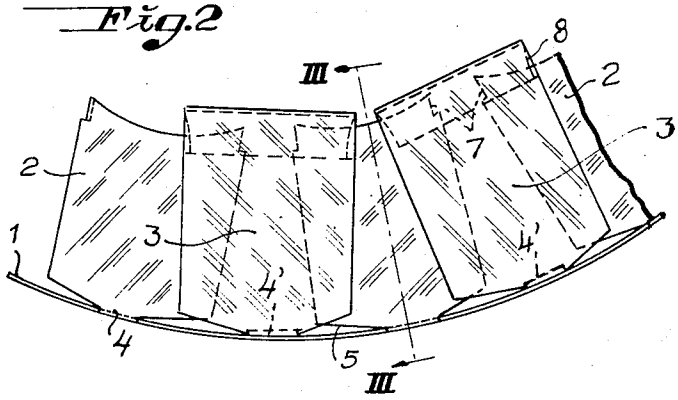


Fig. 2



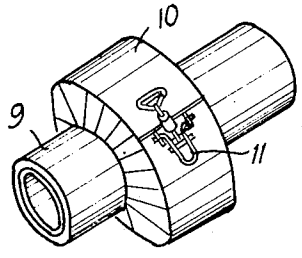


Fig. 4

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BANDLIKE MATERIAL FOR PROTECTIVE COVERS

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5 Claims. (Cl. 154—44)

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One object of the invention is to provide a band-like material for producing protective covers for the insulation of round flanges, valves or similar means of steam-pipes or the like.

Another object is to provide a band that may be easily adapted for covers of different diameters, that is for different flanges and valves, by cutting off different lengths of the band which may be bent around the insulation and attached by means of suitable locking means.

A further object is to provide a band that may easily follow any existing irregularities of the insulation.

In the accompanying drawing there is shown by way of illustration one embodiment of a band according to the invention and a protective cover produced of this band.

In the drawing

Fig. 1 is a view of a portion of one longitudinal edge of the band-like material seen from the middle of the band, the flaps being bent so as to lie in the plane of the band proper.

Fig. 2 is a side view of a portion of the band-like material seen from the outside.

Fig. 3 is a sectional view according to line III—III in Fig. 2.

Fig. 4 is a perspective view of a protective cover produced by the band shown in Figs. 1–3 and applied around the insulation of a flange of a steam-pipe.

Referring to the drawing, 1 designates a band consisting of sheet material. Along the longitudinal edges said band 1 is provided with flaps 2 and 3. The flaps 2 are stamped out of the sheet material of the band 1 and bent substantially perpendicularly to the surface of said band, said flaps and said band being connected only along a small portion 4 in the middle of the flaps which portion is narrow relatively to the width of the flaps. The flaps 3 are attached to the band 1 by means of a tongue 4' spot-welded to the band, the width of said tongues 4' being of the same size as the width of the portion 4 so that the flaps 3 are also connected with the band only along a portion of the flaps which is relatively narrow relatively to the width of the flaps. The edge of the flaps adjacent to the band extends obliquely outwards on the sides of the tongue 4' and portion 4 respectively, as is shown at the edge 5, in order to facilitate bending of the band and in order to prevent the edges 5 from projecting beyond the outer envelope surface of the bent band.

The flaps 2 and 3 are so closely arranged that they overlap each other, even when the band

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is straight. This is made possible owing to the fact that the flaps 2 extend in one plane and the flaps 3 in another plane parallel with said one plane and close to the latter, as is apparent from Fig. 3. The flaps 2 and 3 together form a completely closed side-wall. The outer edge of the flaps 3 is bent down and from both sides the flaps 2 extend into the space between the flaps 3 and their down-bent edge 6. In Fig. 1 the edge 6 of the left hand flap 3 is shown bent down, while the edge 6 of the right hand flap 3 is shown before it has been bent down. Preferably, the outer edge of the flaps 2 has the form of a concave curve in order that said edge may follow as much as possible the shape of a pipe or the like around which the band is to be applied.

The outer corners 7 of the flaps 2 and the corners 8 of the down-bent edges 6 are bent in such a manner that when the band is straightened and bent in a direction opposite to the flaps, said corners of the latter engage each other and prevent a complete separation from one another. If the flaps would not overlap each other at the top, it might be difficult to bring the flaps into a normal engagement with each other when the band is bent back.

In Fig. 4 the numeral 9 designates an insulated steam-pipe the insulation of a couple of flanges of which is protected by means of a cover 10 produced by the band material described above. The band material is cut off and bent according to the length and the form of the insulation of the flanges. The flaps form a protection for the end faces of the flange insulation against damage. The protective cover 10 is retained by means of a suitable locking means 11. From the above it will be seen that the protective cover 10 may be easily removed in case of necessity.

The insulation for the flanges may be attached directly to the band 10, for instance, when the insulation consists of glass-wool or the like kept together by means of steel wire, by welding sheet strips, arranged inside the steel wire, to the band 10.

It is possible to provide flaps only on one of the longitudinal edges of the band, if it is desired. Further, all flaps may be integral with the band and stamped out of the same or all flaps may be attached to the band by welding or soldering.

The embodiments shown are intended to be merely illustrative of means for carrying out the invention and I do not desire to be limited to any of the details of construction therein except as defined in the claims.

What I claim is:

1. A band-like material for protective covers comprising a flexible even band having flaps projecting from at least one of the longitudinal edges of said band substantially perpendicularly to the plane of said band, every other flap along one and the same edge extending in one plane and the remaining flaps along said edge extending in another plane close to and parallel with said one plane, said flaps forming a substantially continuous wall, and each said flap being connected to said band only along a portion of its width, said flaps overlapping each other when the band is straight.

2. A flexible band as defined in claim 1 wherein the edges of said flaps adjacent the portion connecting the same to said band extend obliquely away from said band.

3. A flexible band as defined in claim 1 wherein every other flap is integral with said band and the other flaps therebetween are attached to said band.

4. A band-like material for protective covers comprising a flexible even band having flaps projecting from at least one of the longitudinal edges of said band substantially perpendicularly to the plane of said band, every other flap along one and the same edge extending in one plane and the remaining flaps along said edge extending in another plane close to and parallel with said one plane, said flaps forming a substantially continuous wall, and each said flap being connected to said band only along a portion of its width, the edge of said flaps adjacent to the band extending obliquely outwards on the sides of said portion, said flaps overlapping each other when the band is straight, the outer edge of each second flap being bent towards the band in a direction substantially parallel with said flap and the outer edge of the other flaps having the form of a concave curve, said latter flaps extending into the space between the former flaps and their down-bent edge.

5. A band-like material for protective covers comprising a flexible even band having flaps projecting from at least one of the longitudinal edges of said band substantially perpendicularly to the plane of said band, every other flap along one and the same edge extending in one plane and the remaining flaps along said edge extending in another plane close to and parallel with said one plane, said flaps forming a substantially continuous wall, and each said flap being connected to said band only along a portion of its width, the edge of said flaps adjacent to the band extending obliquely outwards on the sides of said portion, said flaps overlapping each other when the band is straight, the outer edge of each second flap being bent towards the band in a direction substantially parallel with said flap and the outer edge of the other flaps having the form of a concave curve, said latter flaps extending into the space between the former flaps and their down-bent edge, the corners of said down-bent edges and the outer corners of said latter flaps being bent towards each other.

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