Aug. 18, 1936. H. DEAKIN 2,051,076

METHOD OF MAKING THERMAL INSULATION

Filed Feb. 1, 1935

Fig. 1.

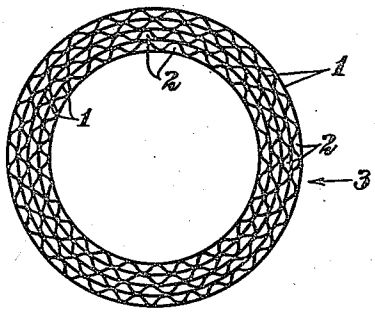



Fig. 2.

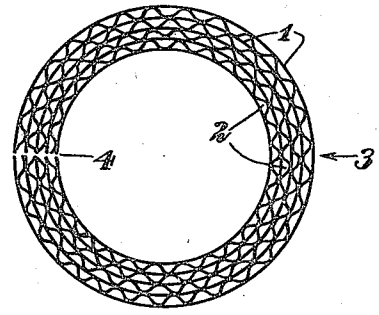



Fig. 3.

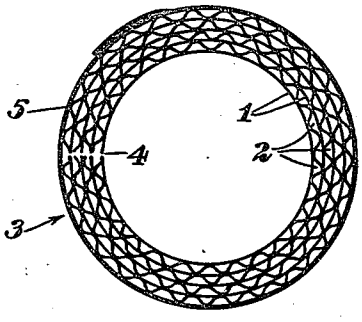



Fig. 4.

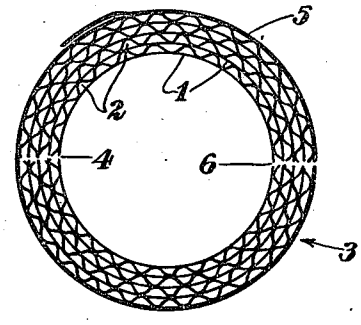
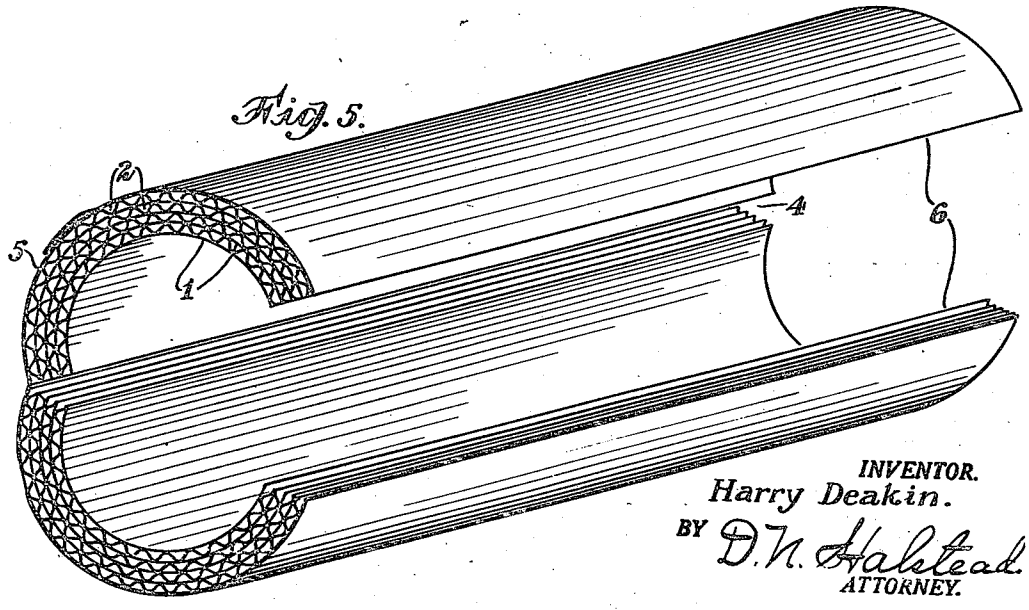



Fig. 5.




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2,051,076

## METHOD OF MAKING THERMAL INSULATION

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Application February 1, 1935, Serial No. 4,588

2 Claims. (Cl. 154—28)

This invention relates to a tubular thermal insulating product that opens freely and to the method of making the same.

The invention is particularly adapted for use in connection with sectional pipe covering of the type of a composit of a plurality of sheets of asbestos paper, wool felt or like insulating material, the said sheets defining voids therebetween.

In making such tubes it has been conventional, heretofore, to form, first, a tubular body portion, apply, if desired, a wrapper around the tube, saw longitudinally completely through the tube on one side and continue the sawing into but not completely through the opposite side. There is thus produced a scored back, upon which the tubular product may be opened. This back contains ordinarily two or three plies of unsevered sheet material, the number of plies frequently varying at different positions along the back.

With such tubular insulation, there has been difficulty in making a product that opens along an approximately straight line, without tearing or breaking of the sheets at the back portion, and that, after being installed around a pipe, forms a close-fitting joint along the open edge and shows no tendency to spring open.

It is an object of the present invention to provide a product overcoming the disadvantages mentioned. Other objects and advantages will appear from the detailed description that follows.

The invention is illustrated in the drawing in which

Figs. 1–4 show end views of the product, in successive stages of development or manufacture; and

Fig. 5 shows a perspective view of the finished product, in opened condition.

The figures are in part diagrammatic as to features not included in the invention.

In the various figures like reference characters denote like parts.

There are shown a plurality of flexible sheets 1 of thermal insulating material, such as asbestos paper or wool felt, defining therebetween voids 2. The sheets may be composited to form a body portion of desired wall thickness, say, one inch or more, in a tubular article such as illustrated in Fig. 1. It will be understood that the compositing may be made permanent by suitable means, as, for example, by the use of sodium silicate or other adhesive applied, as desired, to the surfaces of the sheets being composited.

The resulting tube 3 is then completely and continuously severed in a longitudinally extending zone 4, as by being sawed through.

Next, a wrapper or backing 5, as, for instance, a heavy but yieldable sheet of woodpulp paper, is adhered to the material adjacent to each side of the zone 4, suitably over the entire outer surface of the tube.

Finally, the article with the adhered wrapper 5 is completely and continuously severed in a longitudinally extending zone 6, that is, approximately opposite the position of zone 4. Thus, the two zones may be radial and spaced approximately 180° apart.

The resulting product has interesting features. It contains the body portion in the form of two semitubes, each adhered to the wrapper 5. At the zone 4, the wrapper extends between these two semitubes as a single or thin ply of flexible material and constitutes a hinge upon which the article is freely opening; opening of the article, as for insertion around a pipe to be insulated, requires simply the flexing of the ply 5 of wrapper material. Because of the regularity of the flexing, along a practically straight line, the article maintains well the shape of the two semitubes and is adapted to fit closely around a tubular article to be insulated.

It will be understood that the particular difficulties discussed would be replaced by difficulties of another nature, if the material composing the body portion were brittle rather than yielding, as in the case of the structure to which the present invention is directed. A brittle portion not severed completely at the joint or back would prevent opening altogether or would break when opening is attempted and thus relieve the wrapper of the strain to which it would be subjected otherwise.

The above description and specific examples are to be taken as illustrative only. Any variation or departure therefrom which conforms to the spirit of the invention is intended to be included within the scope of the claims.

What I claim is:

1. In making a freely opening sectional tubular thermal insulating article, the method which comprises forming a tube of thermal insulating material, severing the tube completely and continuously in a single approximately longitudinal zone, adhering a flexible wrapper to material adjacent to each side of the said zone, and then completely and continuously severing the product in a longitudinal zone approximately opposite the first-mentioned zone.


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2. In making a freely opening sectional tubular thermal insulating article, the method which comprises compositing into a tube flexible sheet insulating material, of the type of asbestos paper, completely and continuously severing the tube in a single approximately longitudinal zone, adhering a yieldable wrapper around the thus severed article, and then completely and continuously severing the product in a longitudinal zone approximately opposite the first-mentioned zone.

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