May 3, 1932. D. A. DOM 1,857,108

BRAKE BAND LINING

Filed Nov. 30, 1928

Fig. 1.

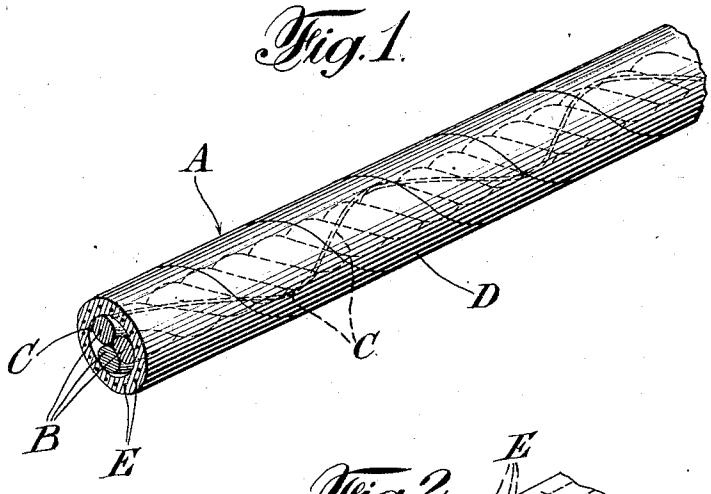


Fig. 2.

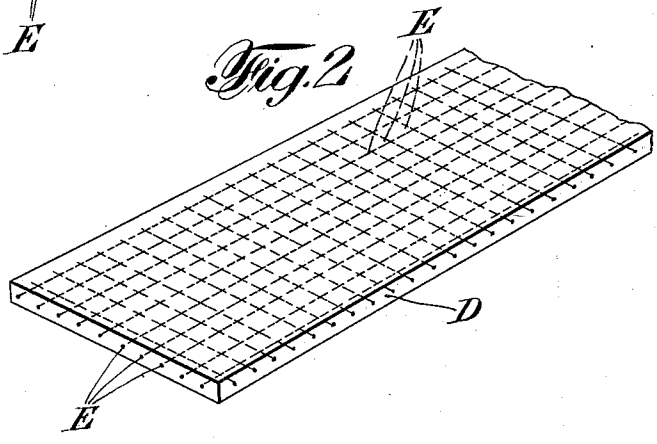
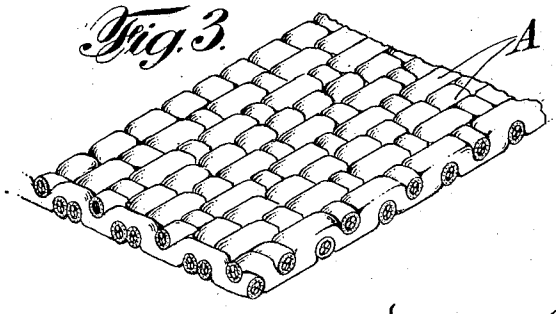


Fig. 3.



Dudley A. Dom INVENTOR

BY Geo. W. Mills Jr.

ATTORNEY

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UNITED STATES PATENT OFFICE

DUDLEY A. DOM, OF WYOMING, OHIO, ASSIGNOR TO THE PHILIP CAREY MANUFACTURING COMPANY, A CORPORATION OF OHIO

BRAKE BAND LINING

Application filed November 30, 1923. Serial No. 322,886.

My invention relates to brake band linings. It is particularly addressed to the manufacture of brake band linings of woven fabric, using for the yarns or threads or cords forming the fabric a paper formed into a yarn or thread or cord. These yarns, threads or cords are formed from relatively short fibers matter together into paper and then wrapped around a core to form the yarn, thread or cord. This saves the more expensive materials, reduces the labor and time, and dispenses with the carding heretofore required to form the yarns, threads or cords, and at the same time makes a much more economical brake lining.

By my invention the thread, yarn or cord is provided with a core of metal, the quantity of which can be easily regulated, so as to provide all the metal necessary in forming a brake band. Around this metal core I wrap ribbons preferably of a special reinforced paper formed for the purpose from relatively short asbestos fibers having embedded in the paper sheet during the course of manufacture a loosely woven mesh material such as a very coarse cheese cloth or similar product which provides the paper with longitudinal and lateral reinforcing strands thereby affording the requisite strength to the paper so that when it is cut in ribbon like form it may be readily wrapped around and enclose the wire core thereby forming the thread or cord or yarn from which the brake band is to be manufactured.

In the drawings, Fig. 1 is a perspective view of the yarn, thread or cord used in the manufacture of my brake band lining. Fig. 2 illustrates the reinforced paper used in the manufacture of my yarn, and Fig. 3 shows a perspective view of a piece of my improved brake lining.

In the drawings, A is the yarn, thread or cord used in making the brake lining. This yarn, thread or cord A consists of a core B, formed preferably of three strands of wire twisted around each other, around which is wound a thread or cord C of linen, cotton or other suitable material. This thread C being wrapped around the core B provides the metal core B with means for holding the paper which is wrapped around the core from movement longitudinally of the core so that any pull or strain put on the cord A in the weaving is transmitted from the paper D forming the surface of the yarn, thread or cord through the paper to the thread C and thence to the metal core B. After the thread C has been wound around the core B, I wrap around the core B having the thread C on it, the asbestos paper D which has the reinforcing fabric E embedded in it. This reinforcing fabric E, as is shown by dotted lines in Fig. 2, serves to give longitudinal and lateral strength to the paper D so that it may be wound about the core without danger of breakage. In Fig. 3 showing my finished brake band lining, I have shown a small section of the brake band lining illustrating the yarns, thread or cord A, which form the warp and weft of the lining and as will be seen, provide a brake band lining which is made up very largely of mineral fibers and metal strands. When this fabric has been woven in the ordinary way to form the brake band lining shown in Fig. 3 it is then saturated with any of the well known saturants used in the manufacture of brake band linings after which it is dried, then compressed and is ready for use.

If desired any number of strands of wire could be used or any size wire, although I prefer to use three strands. I regulate the quantity of metal in the brake band by either the size of the wire or the number of strands.

Claims:

1. A friction material composed of a woven fabric having threads containing reinforced asbestos paper in which the reinforcement is integral with the paper.

2. In a friction material a woven fabric

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having threads containing asbestos paper with a reinforcement embedded therein.

3. In a friction material a woven fabric having threads consisting of a core with asbestos paper wrapped around the core, said paper having a reinforcement embedded therein.

4. In a friction material a woven fabric having threads consisting of a metallic core with asbestos paper wrapped around the core, said paper having a reinforcement embedded therein.

5. In a friction material a woven fabric having threads consisting of a core with reinforced asbestos paper wrapped around the core.

6. In a fraction material a woven fabric having threads consisting of a core containing a plurality of twisted wires and asbestos paper wrapped around the core, said paper having a reinforcement embedded therein.

7. In a friction material a woven fabric having threads consisting of a core composed of metallic and non-metallic strands and reinforced asbestos paper wrapped around said core.

8. In a friction material a woven fabric having warp threads consisting of a core composed of metallic and non-metallic strands and asbestos paper wrapped around said core, said asbestos paper being reinforced by longitudinally extending flexible reinforcements.

9. In a friction material a woven fabric having threads consisting of a core composed of metallic and non-metallic strands and asbestos paper wrapped around said core, said asbestos paper being reinforced by longitudinally extending flexible reinforcements embedded therein.

10. In a friction material a woven fabric having threads consisting of a core composed of metallic and non-metallic strands and asbestos paper wrapped around and enclosing said core, said asbestos paper being reinforced by longitudinally extending flexible reinforcements embedded therein.

11. In a friction material a woven fabric having threads therein, composed of a plurality of wire strands twisted together, a ribbon like strip of asbestos paper wrapped around said strands, means to prevent free movement of said paper longitudinally of the strands.

12. In a friction material a woven fabric having threads therein, composed of a plurality of wire strands twisted together, a ribbon like strip of reinforced asbestos paper wrapped around said strands, means to prevent free movement of said paper longitudinally of the strands.

13. In a friction material a woven fabric having threads therein, composed of a plurality of wire strands twisted together, a ribbon like strip of asbestos paper having longitudinally extending reinforcements embedded therein wrapped around said strands, means to prevent free movement of said paper longitudinally of the strands.

14. In a friction material a woven fabric having threads therein, composed of reinforced asbestos paper wrapped around a metallic core, said fabric having a suitable saturating material in it.

In testimony whereof, I have signed my name to this specification.

DUDLEY A. DOM.