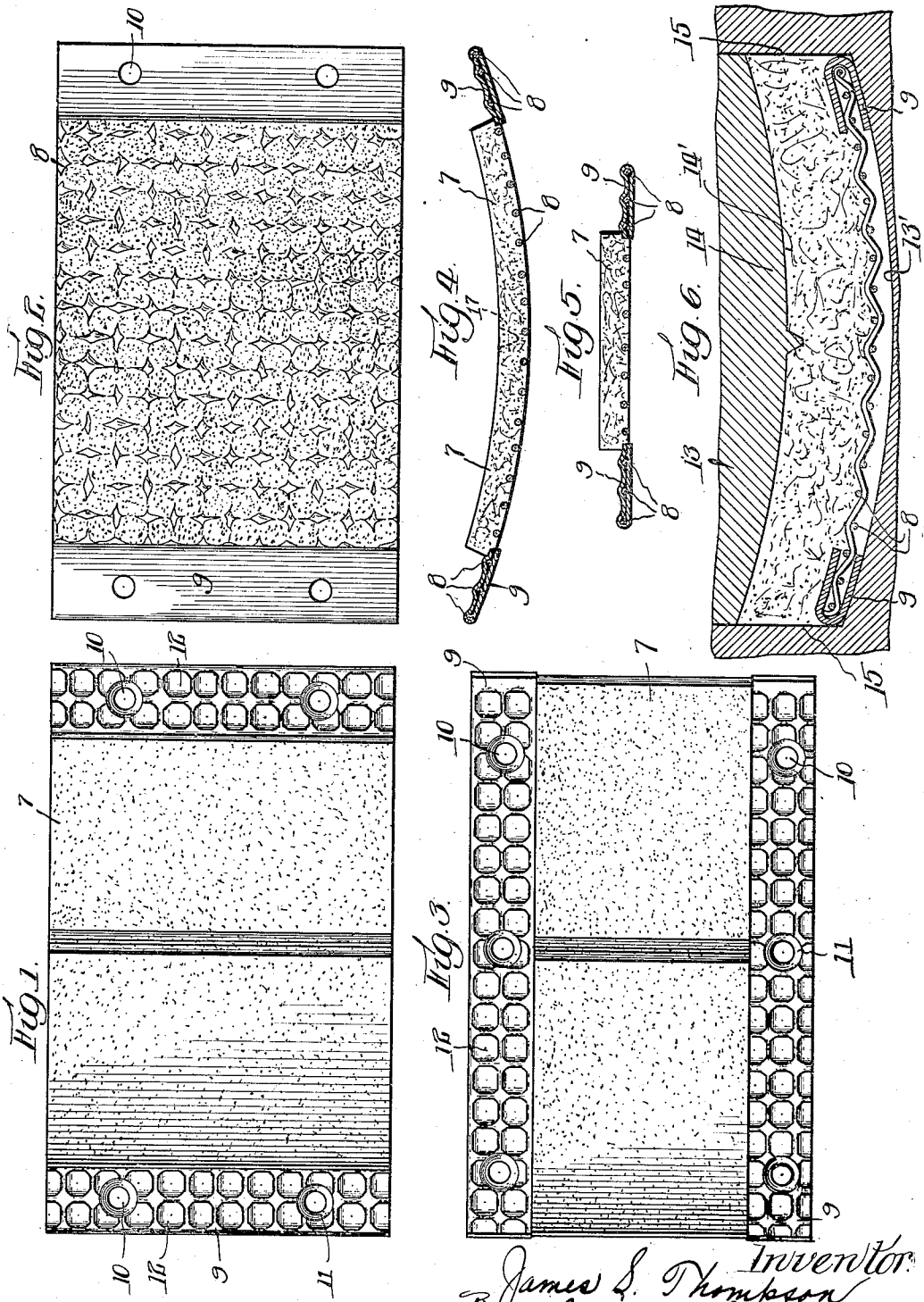
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METHOD OF MAKING FRICTION BLOCKS

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## METHOD OF MAKING FRICTION BLOCKS

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The invention relates generally to friction brakes and its object is to provide a novel method of making friction blocks or shoes for use in braking a moving member by frictional contact therewith.

I have illustrated the invention in a selected embodiment in the accompanying drawings in which

Fig. 1 is a front plan view of a block for an external contracting brake.

Fig. 2 is a back plan view of the block shown in Fig. 1.

Fig. 3 is a front plan view of another form of block.

Fig. 4 is a longitudinal section of the block shown in Fig. 1.

Fig. 5 is a transverse section of the block shown in Fig. 3.

Fig. 6 is a sectional view of the mold showing the materials therein for making the block.

Referring to the drawings the block comprises a body 7 mounted upon and anchored to a reticulated metal back 8 which may be a wire mesh, expanded metal or some other form of reticulated metal. The body is made of a suitable composition which will provide friction sufficient for the intended purpose and which is wear and heat resistant. The back is embedded in the body and is rigidly united therewith. In the particular adaptations of the invention shown in the drawings, portions of the back project beyond the body of the block to receive the means whereby the block is secured in place on its support. In Figs. 1, 2 and 4 the back projects beyond the ends of the body and in Figs. 3 and 5 the back projects beyond the sides of the body. Each projecting part of the back is provided with a reinforce on both sides, preferably in the form of a strip of sheet metal 9, which is bent upon itself in U-shape and encloses the projecting part of the back. This strip reinforces the back where it receives the fastening means by which the block is secured on its support, the strip being provided with openings 10 to receive the fastening devices. These openings are punched through the doubled reinforce and the enclosed projecting part of the back, and this punching will ordinarily proceed from the front of the block so that the edge 11 surrounding each opening will be depressed through the end of the back towards or into engagement with that part of the strip at the back of the block as more particularly set forth in my original application. For some purposes the depression of the edge or edges of the openings in the interstices of the reticulated back may be sufficient to provide a secure anchorage for a strip on the back and for the fastening means to the block, but I prefer to indent or depress other portions of the strip in the reticulations of the back as indicated at 12, so that the strip will be anchored to the back substantially throughout at least the inner side thereof, and this can be accomplished in the operation of molding the body on the back. In Fig. 6 I have shown a mold 13 having a movable plunger 14, the bottom 13′ of the mold and the operative face 14′ of the plunger being curved, as shown, to produce an arcuate block or they may be flat to produce a flat block. In practice the back with the U-shaped strips on its ends, or on its sides, is arranged in the mold with the body material and pressure is then applied by operating the plunger 14 to form the block. The back with the strips thereon is of a length slightly greater than the distance between the end walls 15 of the mold cavity and it is curved in the operation of inserting the back in the mold, at the bottom of the cavity, as indicated in Fig. 6. A sufficient quantity of the body material for making the desired block is suitably disposed in the mold upon the back and then pressure is applied by operating the plunger to compress the body material and mold it upon the back to form the block. The pressure applied by the plunger 14 will be sufficient to force the body material through the reticulations in the back and cause it to spread to some extent on the back, and will also be sufficient to produce indentations of the strip throughout its length as indicated at 12. The block may then be removed from the mold and

the portions of the body may be removed to clear the strips as shown in Fig. 1. Then the openings 10 are punched. That portion of the doubled strip which lies on the front or body side of the reticulated back is indented while that portion of the double strip which lies on the back of the reticulated back is left flat so that it will make flat engagement with the support upon which the block is mounted. Thus the body is compressed and molded on the back in one molding operation and at the same time the strips are anchored to the back because the pressure applied in molding the body is sufficient to cause the body material to indent the strips at 12 into reticulations of the extended portions of the back. The body may be provided with a kerf 17 as indicated in broken lines in Fig. 4 which extend to or substantially to the reticulated back to facilitate bending the block between its ends to fit supports which vary considerably in curvature. The invention may be employed in making brake blocks of this general type for friction brakes of different kinds. I have illustrated the invention as used for making a block for an external contracting brake but obviously the bottom of the mold cavity may be made with a convex instead of a concave curve and the operative face of the plunger may be made with a concave instead of a convex curve for molding a block for an internal expanding brake. Other changes may be made in the general practice of my invention within the scope of the following claims.

I claim:

1. The herein described method of making friction blocks which consists in placing a supporting back and body material in a mold, applying pressure to mold the body material on the back over one entire side of the back, and then removing portions of the body to uncover corresponding parts of the back.

2. The herein described method of making friction blocks which consists in placing a supporting back and body material in a mold, applying pressure to mold the body material on the back over one entire side of the back, and then removing edge portions of the body to uncover corresponding parts of the back.

3. The herein described method of making friction blocks which consists in providing a supporting back and in reinforcing edge portions thereof, placing the back in a mold and flexing the same, disposing the body material in the mold, applying pressure to mold the body material on the back over one entire side of the back, and then removing portions of the body to uncover the reinforced edge portions of the back.

4. The herein described method of making friction blocks which includes providing a supporting back made of reticulated material with reinforcing strips on edge portions thereof, placing the back and body material in a mold, and applying pressure on the body material and reinforcing strips to depress and indent the strips in the interstices of the back.

5. The herein described method of making friction blocks which includes providing a supporting back made of reticulated material with reinforcing U-shaped strips enclosing edge portions of the back, placing the back and body material in a mold, the outer sides of the U-shaped strips engaging flatly the bottom of the mold, applying pressure to mold the body material on the back over one entire side of the back and at the same time cause said body material to depress and indent the inner side of the strips in the reticulations of the back, and then removing portions of the body to uncover the reinforced edges of the back.

6. The herein described method of making friction blocks which consists in providing a mold having a mold cavity therein, placing in the mold a supporting back of greater length than the length of the mold cavity and flexing the back so that it will be seated in the mold cavity at the bottom thereof, placing body material in the mold cavity on said back, and applying pressure to mold the body material on the back.

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