Aug. 19, 1952 P. A. SOLEM 2,607,470

CONVEYER TRACTION BLOCK

Filed Jan. 15, 1949

Fig. 1

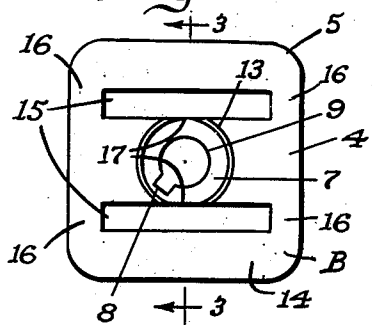


Fig. 2

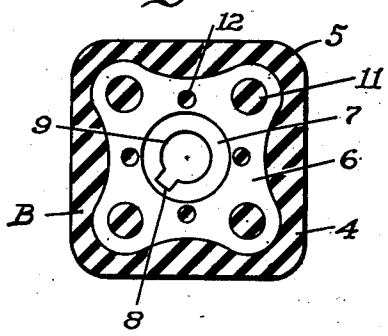


Fig. 3

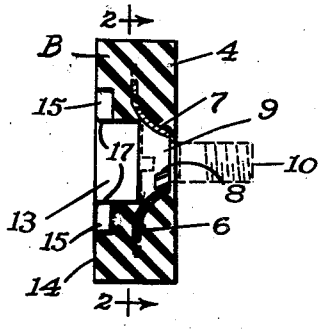
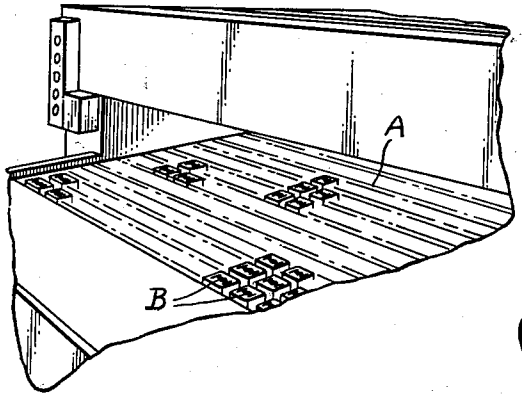


Fig. 4



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CONVEYER TRACTION BLOCK

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2 Claims. (Cl. 198—197)

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This invention relates to a new and improved traction block for furnishing a cushion traction surface on the traveling work-feeding bed or carrier of a sanding machine, or the like, and is more particularly concerned with improvements in the traction block disclosed in my earlier Patent 1,327,296, issued January 6, 1920.

The principal object of the present invention is to provide a rubber traction block having a stamped sheet metal insert to enable the more secure fastening of the block to the bed, and having in the work-engaging top face depressions long enough and wide enough to give a suction cup effect for increased traction and at the same time decrease the transverse wall thicknesses at all points around these depressions so that a higher degree of cushioning effect is obtained, without, on the other hand, weakening the block to an extent where the rubber is apt to tear or wear away too soon at any point, the aim being to obtain substantially uniform wear throughout the area of the working face of the block.

The invention is illustrated in the accompanying drawing, in which—

Fig. 1 is a plan view of a traction block made in accordance with my invention, showing the elongated depressions in the working face, which are placed in communication with one another by the central counterbore provided in the block in concentric relation to the center hole in the metallic anchoring insert;

Fig. 2 is a horizontal section through the block, taken on the line 2—2 of Fig. 3, showing the insert in elevation;

Fig. 3 is a cross-section on the line 3—3 of Fig. 1, and

Fig. 4 is a perspective view of a portion of an endless bed sander showing the feed bed thereof equipped with my improved traction blocks.

The same reference numerals are applied to corresponding parts in the three views.

Sanding machines generally include an endless work-feeding bed or carrier, as illustrated at A in Fig. 4, on which rows of traction blocks B are mounted to provide a good friction hold on the work being fed toward and beneath the sanding drum, or drums, operating above the bed. The bed is usually built up of cross-bars or slats linked together, each having a row of traction blocks fastened thereon, whereby to enable replacement of individual blocks whenever some become worn or may happen to be damaged. The blocks are mounted in spaced relation, with the blocks of one row usually placed in staggered relation with the blocks of the next row, and

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so on. The blocks B are made of resilient material, such as vulcanized rubber, and each is fastened to the bed by a flat headed screw, the head of which is disposed well below the top of the block, so that there is no danger of its coming into contact with the work.

In my earlier patent I disclose a traction block of the kind just described made of vulcanized rubber and having a metallic core plate embedded therein through which the fastening screw, just mentioned, extends for fastening the block to the bed, the metallic insert also serving to reinforce the block against excessive flexure without, on the other hand, reducing its cushioning action too much. The improvements of the present invention are designed to increase the traction and at the same time increase the cushioning action without, on the other hand, weakening the block's structural strength or giving rise to its wearing unevenly or tearing.

Referring to the drawing, the reference numeral 4 designates the body portion of the traction block B, molded of a rubber stock to the generally rectangular or square form shown, with rounded corners 5. 6 is the stamped sheet metal insert or core plate, the central portion 7 of which is depressed and of generally conical form with a key notch 8 extending radially from the center hole 9. The notch 8 receives a locating projection on the bed, to keep the block from turning when it is secured in the usual way, as by means of a screw 10, indicated in dotted lines in Fig. 3. Large apertures 11 in the four corners of the generally rectangular plate 6, and four other smaller apertures 12 therebetween, all serve to insure a good bond between the molded rubber body 4 of the block and the plate 6.

Referring to Figs. 1 and 3, it will be seen that, in addition to the counterbore 13 provided in the center of the block, opening from the flat top or work-engaging face 14, in register with the depressed central portion 7 of the insert 6, the block has two parallel grooves or depressions 15 in the top face, which are closed at both ends, as at 16, but are preferably in intersecting relation to and, hence, open communication with the diametrically opposite sides of the counterbore 13, as indicated at 17. Thus, when the work-engaging face 14 of the block is subjected to compression by a piece of work being fed forward under the sanding drum, the block acts somewhat like a suction cup by virtue of the hollowed out portions 13 and 15 from which air is, of course, expelled upon compression of the block by the work, similarly, if not to the same degree, as when a suction cup is compressed for

application to a surface to be gripped, so that far better traction is obtained and the likelihood of slippage of the work is reduced to a minimum. The grooves 15 are of appreciable depth in relation to the thickness of the block, as appears in Fig. 3, and also of appreciable length and width in relation to the length and width of the block, as appears in Fig. 1, so as to make for easier give and accordingly increase the cushioning action of the block and, likewise, its suction cup effect, without, however, weakening the block to the point where there is any danger of the rubber tearing or wearing away too rapidly or unevenly.

It is believed the foregoing description conveys a good understanding of the objects and advantages of my invention. The appended claims have been drawn to cover all legitimate modifications and adaptations.

I claim:

1. A traction block adapted for use on a traveling work-feeding bed in an endless bed sander and the like comprising a centrally apertured, substantially rectangular body of resilient compressible material, said body being of appreciable thickness which is small in relation to its other dimensions and having a substantially flat work-engaging face, said body having a counterbore provided therein extending from the working face part way through the thickness of the body in register with the central aperture adapted to

receive a fastening screw for fastening the block on a support, and said body also having two substantially parallel elongated grooves provided within the area of its working face in spaced substantially parallel relationship to adjoining edges of the block and communicating intermediate their ends with the diametrically opposite sides of the counterbore, whereby to make the block function to an appreciable extent as a suction cup for increased traction.

2. A traction block as set forth in claim 1, including a metallic core plate embedded within said body which is centrally countersunk and apertured, the countersunk portion registering with the counterbore and aperture in said body, but said plate otherwise lying in a median plane in said body, the grooves in the body being shallow enough to leave an appreciable thickness of rubber above the plane of the plate between the plate and the bottoms of the grooves.

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REFERENCES CITED

The following references are of record in the file of this patent:

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Number	Name	Date
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1,327,296	Solem	Jan. 6, 1920
2,042,372	Watson	May 26, 1936