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QUICKLY DETACHABLE SCRAPER BLADES

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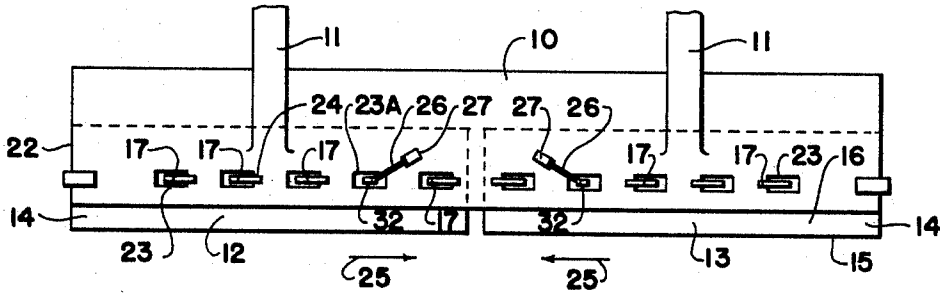


FIG. 1

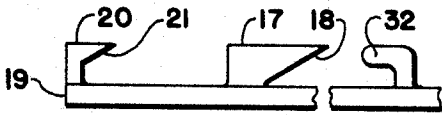


FIG. 3

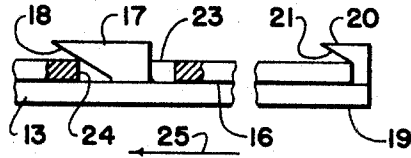


FIG. 6

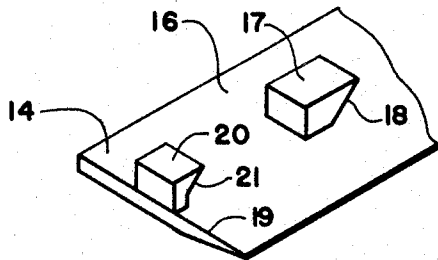


FIG. 2

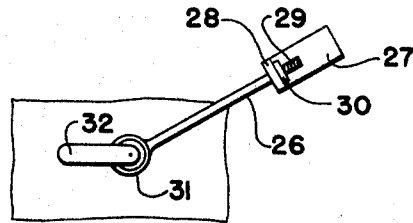


FIG. 4

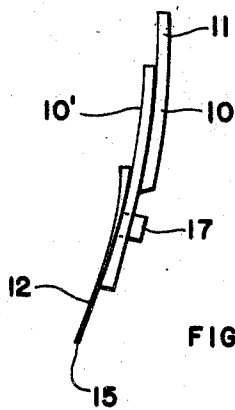


FIG. 5

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QUICKLY DETACHABLE SCRAPER BLADES

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1 Claim

ABSTRACT OF THE DISCLOSURE

A mould board provided with a horizontal row of apertures and a scraper blade superposed on the front of the mould board. The blade carries wedge blocks which project through the apertures to the back of the mould board and have cam edges which lock against edges of the apertures to lock the blade and mould board together when the blade is moved horizontally by means of an eye bolt extending between a block on the blade and a bracket on the mould board.

This invention relates to new and useful improvements in quickly detachable blades for scrapers or the like and although the invention is described with relation to road scrapers, nevertheless it will be appreciated that it can be applied to any form of scraper blade attachable to a back plate or mould board.

The conventional method of attaching such blades to mould boards consist of a plurality of nuts and bolts extending through the blade and mould board.

These are expensive to replace inasmuch as whenever the blades are changed, new bolts are required due to corrosion and wear.

It is also difficult to hold the new blades in place against the mould board while the bolts are being inserted and in fact, considerable danger exists if this operation is attempted by one individual.

The present invention overcomes these disadvantages by providing a plurality of wedge blocks secured to the back of the blade which engage within apertures in the mould board. Means are provided to move the blade edge-wise of the mould board thus tightening the wedge blocks into wedging engagement with edges of the apertures.

A further object of the invention is to provide a device of the character herewithin described in which the blade can be mounted on the mould board readily and easily and then tightened into position by means of an eye bolt situated behind the mould board and thereby protected from damage.

A yet further object of the invention is to provide a device of the character herewithin described which is simple in construction, economical in manufacture, and otherwise well suited to the purpose for which it is designed.

With the foregoing considerations in view, and such other objects, purposes or advantages as may become apparent from consideration of this disclosure and specification, the present invention consists of the inventive concept exhibited in the method, process, construction, arrangement of parts, or new use of any of the foregoing herein particularly exemplified in one or more specific embodiments of such concept, reference being had to the accompanying figures in which—

FIGURE 1 is a rear view of a mould board with the blades attached thereto.

FIGURE 2 is a fragmentary isometric view of one end portion of one of the blades.

2

FIGURE 3 is a side elevation of a portion of one of the blades.

FIGURE 4 is an enlarged fragmentary elevational view showing the eye bolt connection.

5 FIGURE 5 is an end view of FIGURE 1.

FIGURE 6 is an enlarged fragmentary side elevation sectioned in part to show the engagement of the blade with the mould board.

10 In the drawings like characters of reference indicate corresponding parts in the different figures.

Proceeding therefore to describe the invention in detail, reference character 10 illustrates the substantially arcuately rectangular configuration mould board secured to the implement by means of support arms 11 in the usual way.

It is usual to provide a pair of blades 12 and 13 although, in some instances, a single blade can be utilized.

20 Each blade consists of the substantially arcuately curved planar element 14 usually edge sharpened on one edge 15. Secured as by welding or the like to the back surface 16 of the blade, is a plurality of wedge blocks 17 and these wedge blocks are provided with an inclined face or cam edge 18 extending inwardly and rearwardly from the end 19 of the blade and from the rear surface 16.

25 In the present embodiment, there are four such wedge blocks 17 as shown in FIGURE 1 and I also provide a hook block 20 at said outer edge 19. This hook block is also secured to the rear surface 16 as by welding and includes an upwardly and inwardly inclined face 21 which is adapted to engage over the outer end 22 of the mould board 10 when the blade is engaged with the front surface 10' of the mould board. A plurality of substantially rectangular apertures 23 are formed through the mould board and receive the wedge blocks 17 when the blade is in position. The inclined surfaces 18 engage the inner edges 24 forming the boundary of the apertures 23 as illustrated in FIGURE 6.

30 Means are provided to move the blades endwise in the direction of arrows 25 or towards the center of the mould board, said means taking the form of eye bolt assemblies 26. An angulated bracket 27 is secured to the rear surface of the mould board and is provided with an offstanding flange 28 which is apertured to receive the screw threaded end 29 of the eye bolt which can be tightened by means of nut 30.

35 The eye 31 of the eye bolt engages around a hooked element 32 also secured to the rear of the blade 16 and extending through one of the apertures in the mould board specifically designated 23A. By tightening the eye bolt assembly, the blade is moved endwise in the direction of arrow 25 thus causing the wedge blocks 17 to come into wedging engagement with the edges 24 of the apertures and this action together with the engagement of the hook element 20 with the end of the mould board, clamps the blade firmly in position upon the mould board.

40 Removal is simple and entails merely loosening the eye bolt until the hook 32 can be disengaged from the eye 31 whereupon the blade can be knocked in a direction opposite to arrow 25 so that it can be detached.

45 Apart from the improvement in holding the blade to the mould board, a further improvement is found in the strength of the blade. Usually a plurality of relatively large bolt holes are formed through the blade which weakens same considerably. These are, of course, eliminated in the present construction thus strengthening the blade.

What is claimed to be the present invention is:

1. The combination of a horizontally elongated mould board having a front and back and provided with a horizontal row of rectangular apertures, a horizontally elongated scraper blade superposed on the front of said mould board, a plurality of wedge blocks secured to said blade and projecting rearwardly through said apertures to the back of the mould board, said blocks having cam edges which extend obliquely rearwardly from said blade in the same horizontal direction and are wedgingly engageable with edges of said apertures in the mould board, and means for moving said blade in said horizontal direction relative to the mould board whereby to lock said blocks in said apertures and hold the mould board and blade assembled, said means comprising a hook provided on said blade and projecting through one of said apertures to the back of the mould board, a bracket provided on the back of the mould board at a point offset horizontally from said hook, and an eye bolt having its eye in engagement with said hook and also having a nut-equipped screw-

threaded shank portion extending through and adjustable in an aperture provided in said bracket.

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37—141; 172—751, 753

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