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W. J. ROOT

2,556,983

CEMENT FINISHING FLOAT BLADE

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Fig. 1

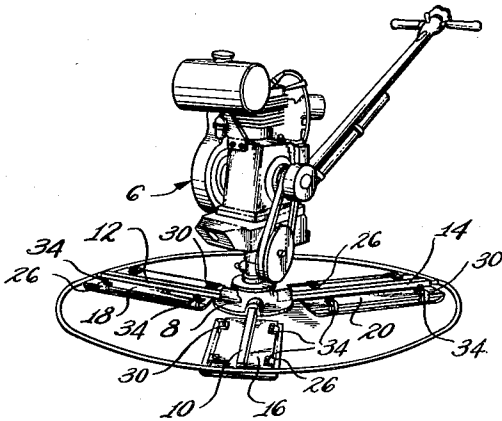


Fig. 2

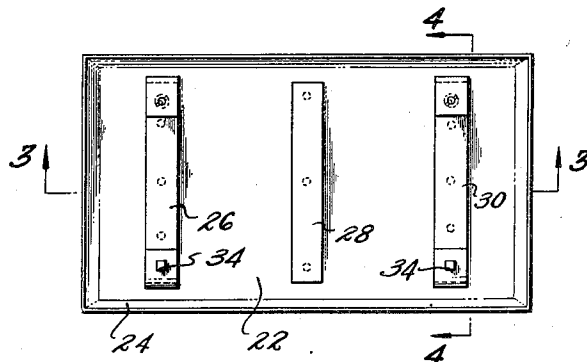


Fig. 3

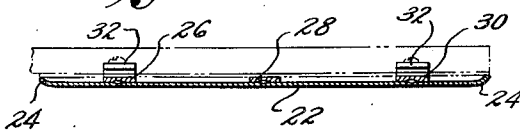


Fig. 5

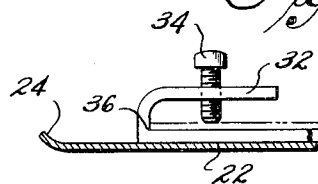
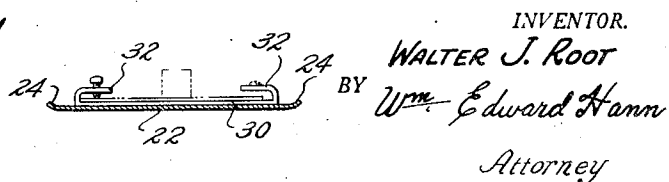


Fig. 4



UNITED STATES PATENT OFFICE

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CEMENT FINISHING FLOAT BLADE

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2 Claims. (Cl. 94—45)

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This invention relates to demountable float blades for attachment to the finishing blades of a cement finishing machine.

The main objects of this invention are: to provide an improved float blade which is readily demountable on the finishing blades of a standard rotary cement surface finishing machine; to provide a demountable float blade which has a plurality of points of contact or support on the finishing blade; to provide a demountable or detachable float blade which may be quickly and readily attached to or demounted from the finishing blade of a rotary cement finishing machine of standard construction; to provide a float blade of this character of simple and economical design, but of extremely rigid construction which will maintain its shape when subjected to long and hard wear; to provide a demountable float blade of this character which is reversible in application so that when one portion thereof becomes worn through use, it may be reversed and thereby secure longer use before completely wearing out; and to provide a float blade of this character which is supported at a plurality of spaced points so as to maintain its finishing surface in a straight plane when subjected to hard usage.

An illustrative embodiment of this invention is shown in the accompanying drawings, in which:

Fig. 1 is a view in perspective of a gasoline motor driven rotary cement surface finishing machine having my improved float blade attached in position on the finishing blades of such machine;

Fig. 2 is a top plan view of the improved float blade;

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 2 looking in the direction indicated by the arrows, and showing the machine's finishing blade and its supporting arm in broken lines;

Fig. 4 is a transverse sectional view taken on the line 4—4 of Fig. 2 looking in the direction indicated by the arrows and showing the machine's finishing blade in broken lines; and

Fig. 5 is an enlarged fragmentary transverse sectional view showing the means for demountably attaching the float blade to the finishing blade of a rotary cement surface finishing machine, the finishing blade being shown in broken lines.

In the finishing of cement or concrete surfaces, it is desirable to first work the surface of the newly poured cement or concrete with a

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float blade, particularly where coloring pigment or the like is spread or scattered over the surface of the cement. The float blade will tend to work the color into the surface and at the same time bring up the fine aggregates or components of the surface so as to give a smooth uniform surface when finally finished and dried.

The customary practice is to first work the newly poured surface with float blades on a rotary power driven finishing machine, and thereafter finish the surface with the float blades removed, and utilizing the finishing blades with which such standard rotary machines are ordinarily equipped.

The float blade of the present invention has superior characteristics over those now in use, particularly in two respects. First, the blade may be quickly and readily attached to the finishing blade of a standard rotary surface finishing machine, and may be attached in either of two positions—that is, reversed front-to-rear or end-to-end, thereby securing longer wear from the blade before it is completely worn out, and second, the blade of the present invention is supported on the finishing blade with a plurality of points or areas of contact so that the float blade contains a plane surface to give a smooth and even finish to the cement surface being worked upon.

In the construction shown in the drawings, a gasoline motor driven rotary finishing machine, generally designated 6, is provided with the customary rotary power driven head 8 which carries three radially disposed equi-angularly spaced arms 10, 12, and 14, on which are mounted the surface finishing blades 16, 18, and 20, respectively.

My improved float blade comprises a substantially rectangular elongated steel plate 22 having an upturned marginal edge 24 around all edges thereof. That is to say, the side edges and end edges are turned upwardly from the plane of the float blade an equal and uniform amount so as to ride over the surface of freshly poured cement or concrete, add rigidity to the blade or plate, and provide points of support for the plate when attached to one of the finishing blades 16, 18, or 20.

The top surface of the float blade 22 is provided with spaced parallel straps 26, 28, and 30 spot welded or otherwise rigidly secured thereto, and which have a thickness equal to the amount of the upturned marginal edge 24 so that the top surfaces of the straps 26, 28, and 30 and

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the top edge of the upturned margins 24 all lie in the same plane.

The opposite ends of the straps 26 and 30 have both ends reversely bent in spaced parallel relation, as shown at 32 in Fig. 5, and are provided with threaded holes therethrough for receiving set screws 34. It is desirable and preferable that the reversely bent ends 32 are formed with a square sharp shoulder as shown at 36 so that the finishing blade to which they are attached will fit snugly into the corner and provide a bearing for the finishing blade to contact when driven in use. The space between the reversely bent ends 32 of each strap is greater than the width of the finishing blade upon which it is mounted, so that it may be assembled thereon readily by sliding on with an endwise movement.

As shown most clearly in Fig. 4 of the drawings, one of the reversely bent ends of each of the straps only need be provided with a set screw, and the opening in the other reversely bent end of each strap is merely filled with a short threaded screw to keep the threads clean when used in soft cement or concrete and the like.

In the use of this float blade, the same ends 32 of the two straps are plugged with short screws to keep the threads clean, and the other ends 32 are provided with set screws 34 backed away so as to give plenty of room for slipping the float blade endwise onto the finishing blade of a rotary cement finishing machine. The finishing blade upon which the float blade is mounted is then snugly fitted into the sharp corners 36 of the reversely bent portions 32, and the set screws 34 tightened down as shown in Fig. 5 of the drawings.

It is to be noted that when in mounted position, the finishing blade makes contact at each of the upturned ends or marginal edges 24 of the float blade, as well as lying on the top surfaces of the cross straps 26, 28, and 30, thus giving five points of contact or support for the float blade on its finishing blade, as shown most clearly in Fig. 3 of the drawings.

Although but one specific embodiment of this invention has been herein shown and described,

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it will be understood that numerous details of the construction shown may be altered or omitted without departing from the spirit of this invention as defined by the following claims.

I claim:

1. A float blade for a concrete finishing machine comprising: an elongated substantially rectangular plate having a plane surface, with the margins thereof curved upwardly; a plurality of straps mounted on the top surface of said plate, the top surfaces of said straps and the top edges of said upturned margins lying in the same plane so as to provide a plurality of seats for uniformly contacting a finishing blade when secured thereon, the ends of said straps being reversely bent in spaced parallel relation to receive the finishing blade of a cement finishing machine; and set screws threaded through said reversely bent ends to engage such finishing blade.

2. A float blade for a concrete finishing machine comprising: an elongated substantially rectangular plate having a plane surface, with the margins thereof curved upwardly; a plurality of straps mounted on the top surface of said plate, the top surfaces of said straps and the top edges of said upturned margins lying in the same plane so as to provide a plurality of seats for uniformly contacting a finishing blade when secured thereon, both ends of each of said straps being reversely bent in spaced parallel relation to embrace the finishing blade of a cement finishing machine; and set screws threaded through said reversely bent ends to engage such finishing blade.

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