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W. E. TEMPLETON

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CUTTER BAR

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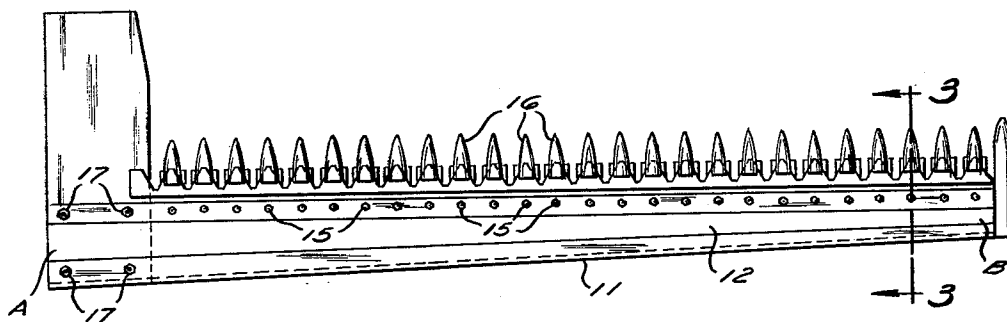


Fig. 1

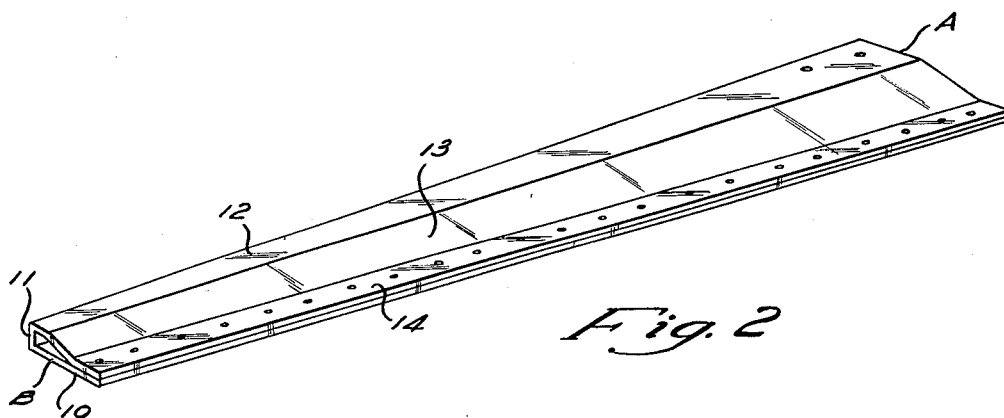


Fig. 2

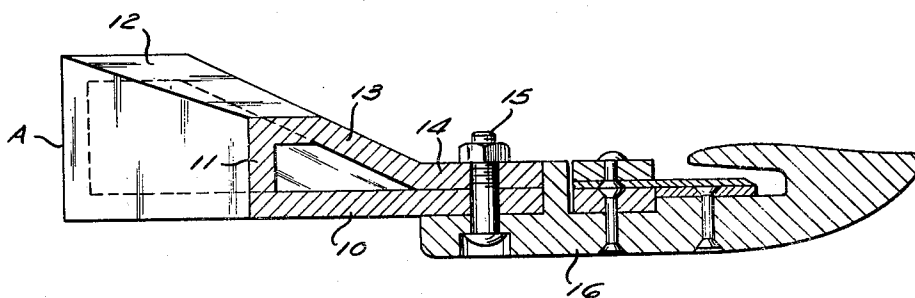


Fig. 3

INVENTOR.

WILLIAM E. TEMPLETON

BY

WATTS, EDGERTON, PYLE, & FISHER

ATTORNEYS

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CUTTER BAR
William E. Templeton, Lexington, Ohio
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2 Claims. (Cl. 56-307)

This invention relates to improvements in supporting bars for reciprocative mower blades and more specifically to bars formed from a unitary plate comprising a pair of superposed linear plate portions in the leading edge thereof and an integral tubular portion in the opposed rearward edge of the bar.

It is essential in power mowers of the type that embody a reciprocative toothed cutter blade, that the supporting bar or rail therefor be free from deflection or arcuate deformation that would impair the axial movement of the cutter blade or initiate frictional strains thereon.

Hence, the object of the invention is to provide a supporting bar for a reciprocative cutter blade which is inherently rigid and free from deflection.

Further objects of the invention reside in the provision of a supporting bar for a cutter blade which is light in weight, economic of manufacture, durable of structure, and constructed to withstand the vertical loads, lateral thrust frequently imposed on the bar.

Other objects and advantages more or less ancillary to the foregoing, and the manner in which all the various objects are realized, will appear in the following description, which considered in connection with the accompanying drawings, sets forth the preferred embodiment of the invention.

Referring to the drawings:

FIG. 1 is a plan view of a cutter bar assembly including the improved supporting bar.

FIG. 2 is a perspective view of the improved supporting bar; and

FIG. 3 is a transverse sectional view of the assembly, the section being taken on a plane indicated by the line 3-3 in FIG. 1.

Referring first to FIGS. 2 and 3, the supporting bar is formed from a unitary plate which is folded to provide a flat linear base strip 10, a vertical rearward end wall 11, a flat top section 12, a downwardly inclined section 13, and a second linear strip 14 that overlies the forward base strip 10. The bar is vertically tapered throughout its length, the height of the larger end A, which is secured to the machine, being approximately twice the height of the free end portion B of the bar. The bar is also tapered transversely throughout its length, the inner end A being approximately two and one-half times the width of the free end B. Bolts 15 are employed to attach conventional cutter blade guard shoes 16. The end A of

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the flat top section 12, and the base strip 10, are also drilled for bolts 17 for the securement of the inner end of the bar on the mowing machine.

Since the improved bar is formed from a blank of rolled and finished sheet metal stock, the wall thickness thereof is obviously uniform and the bar is light in weight. The folds in the rearward portion of the bar form a column of box cross section which is relatively stiff and rigid.

Although the foregoing description is necessarily of a detailed character, in order that the invention may be set forth, it is to be understood that the specific terminology is not intended to be restrictive or confining, and that various rearrangements of parts and modifications of detail may be resorted to without departing from the scope or spirit of the invention as herein claimed.

What is claimed is:

1. In combination:

- (a) an elongated support bar having a support end and a free end;
- (b) a reciprocal cutting blade carried by the bar;
- (c) said support bar being a unitary structure formed of a folded plate, said folded plate having forward portions adjacent its edges in rigid superposed fixed relationship to form a bar leading edge extending from the support to the free end;
- (d) said plate having other portions defining a hollow rear section, said other portions including a generally flat bottom wall portion, a generally flat upstanding back portion, and a top wall portion flaring away from the bottom wall portion rearwardly from said leading edge to the generally flat back portion;
- (e) said top, bottom, and back portions together defining a tube of generally right triangular configuration having its apex at the leading edge;
- (f) said cutter blade being reciprocally mounted to said support bar adjacent said leading edge and extending substantially from said support and to said free end; and,
- (g) said bar back wall portion and leading edge tapering toward one another from the support end to the free end.

2. The device of claim 1 wherein an elongated blade guard is fixed to said leading edge extending from near the support end to near the free end to provide reinforcement of the plate.

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