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[56] **References Cited**
UNITED STATES PATENTS

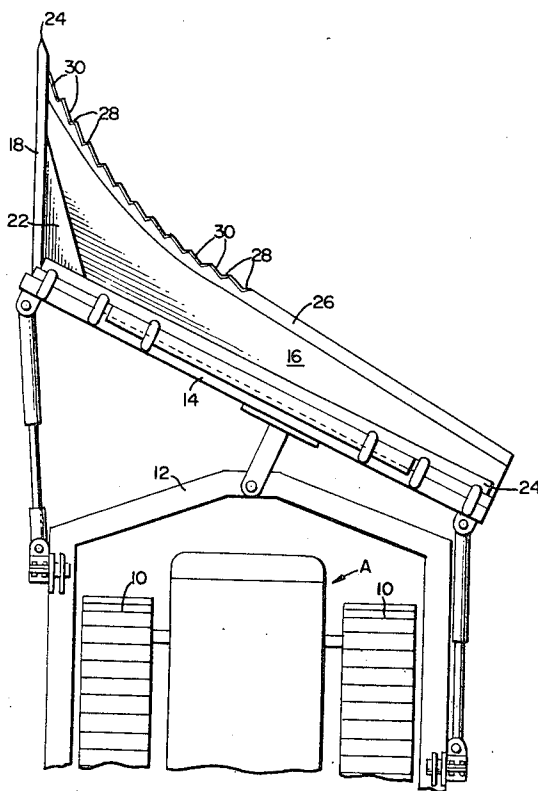
2,485,407	10/1949	Peterson.....	144/34X
3,004,570	10/1961	Clayton et al.....	144/34
3,351,108	11/1967	Hammonds	144/34
3,415,296	12/1968	Frankenberg et al.....	144/34

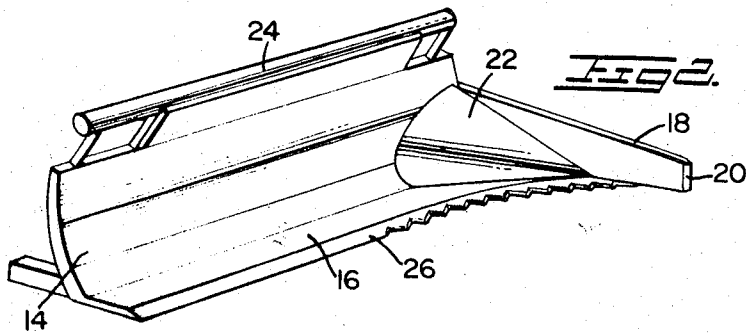
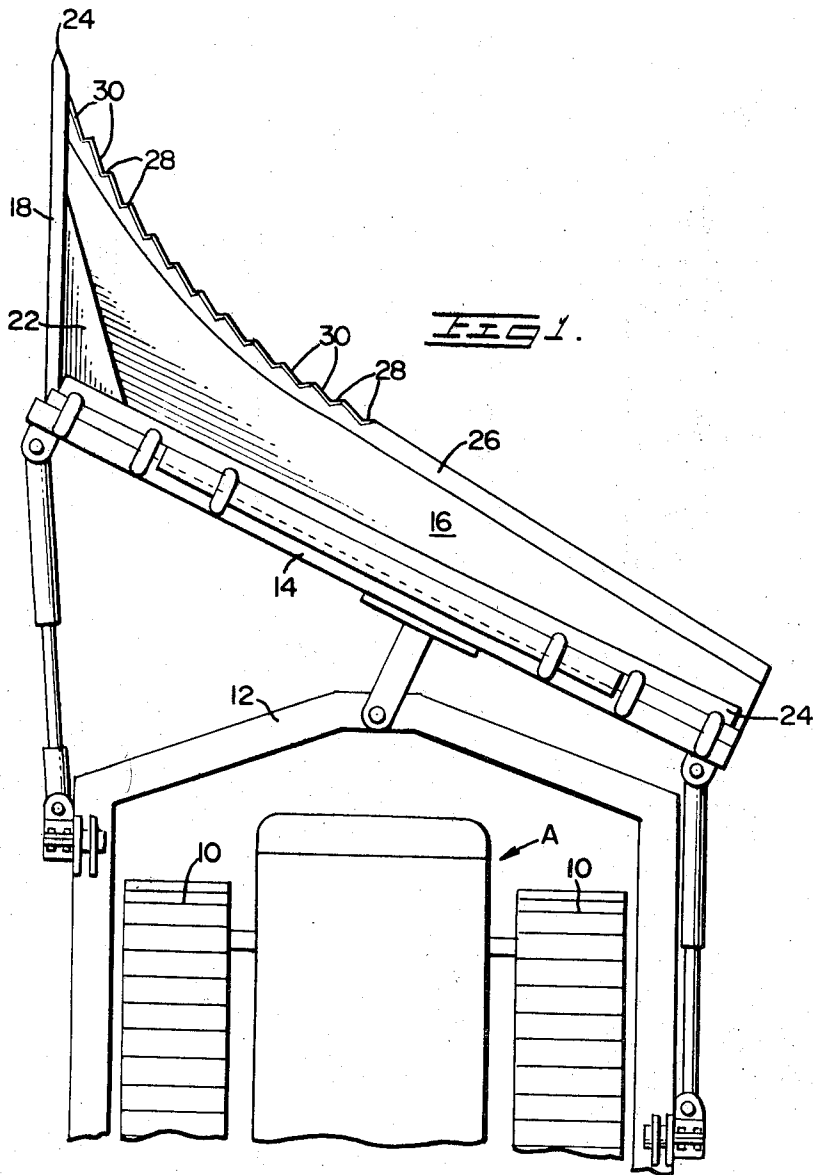
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[54] **LAND CLEARING BLADE**
8 Claims, 8 Drawing Figs.

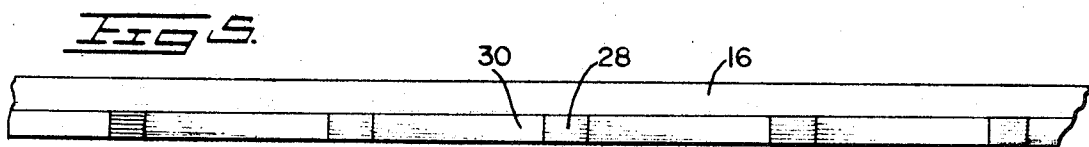
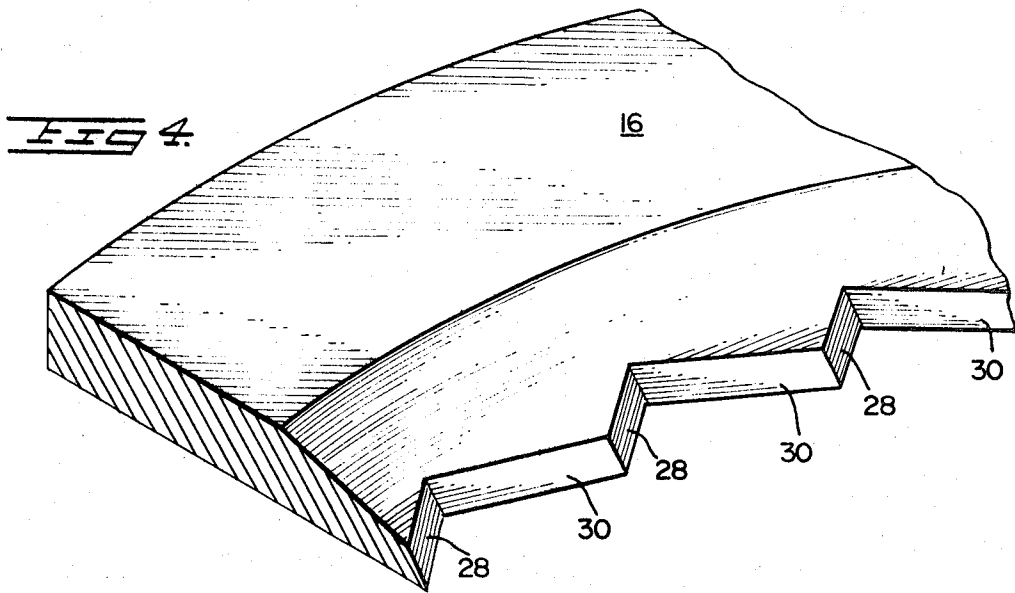
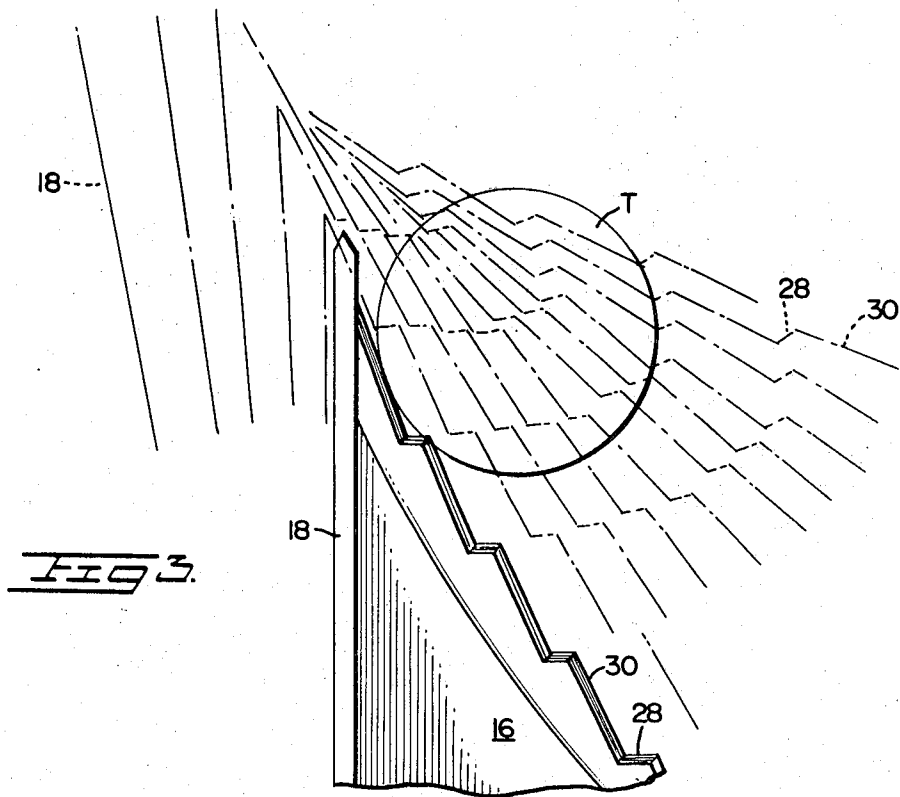
[52] U.S. Cl..... **144/34**
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 3-4, 34, 34-(1-6), 309-34

ABSTRACT: A land-clearing or tree-cutting blade adapted for attachment horizontally to the front of a dozer head and a leading cutting edge for the blade curving forwardly of the width of the blade, the curved cutting edge being interrupted by spaced substantially straight cutting edges normal to the longitudinal axis of the dozer whereby to provide a combined shearing and chiselling action as the blade is thrust through a tree.

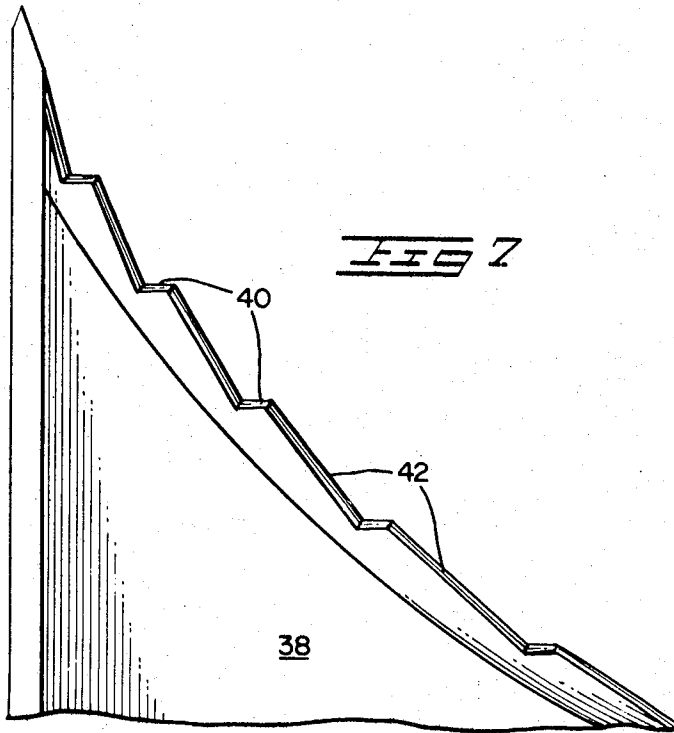
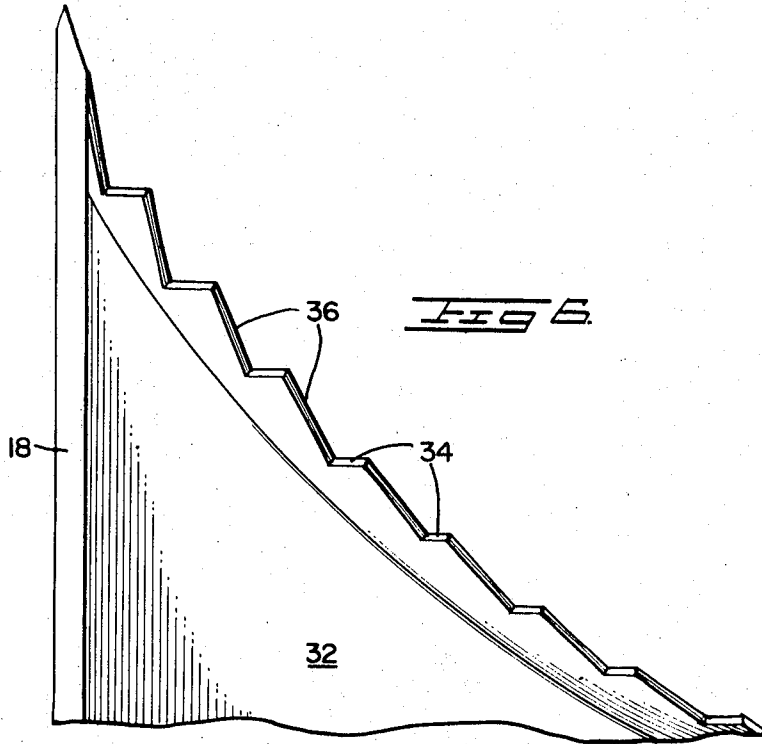




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LAND CLEARING BLADE

The present invention relates to improvements in land-clearing blades of the character adapted for horizontal mounting on the front of a dozer, head to be thrust forwardly by the tractor into brush or trees for leveling the same.

Particularly, the present invention is an improvement over the land-clearing blade of U.S. Pat. No. 3,351,108, the shearing action of which is ordinarily extremely effective and efficient where the tractor possesses sufficient thrusting power. The present improvement interrupts the curved shearing blade of that patent with spaced and relatively smaller substantially straight chisel edges whereby to provide a combined shearing and chiselling action as the blade is thrust through a tree. Thus, the present modified blade operates with extreme effectiveness and efficiency with relatively less tractor thrusting power and is particularly effective where large trees are encountered.

The present invention also contemplates selected variations in width of the chisel edges such as diminishing width from front to back to make for more effective cutting action as the tractor loses momentum and thrust, as a smaller force is required to push a smaller chisel edge through a tree. To similar effect, spacing of the chisel edges along the curve of the blade may be varied such as by increased spacing from front to back, inasmuch as a smaller force is required to push one chisel edge through a tree than to push two chisel edges. In general, the invention contemplates variation of the widths and spacings of the chisel edges to design the blade according to tractor size and power to obtain optimum cutting action.

In another modified form of the invention, the blade may comprise a plurality of curved sections each having cutting edges to obtain the featured combination of shearing action and chisel action.

Other objects and advantages will be apparent from the following detailed description taken in conjunction with the accompanying drawings wherein preferred embodiments of the principles of the invention have been selected for exemplification.

In the drawings:

FIG. 1 is a top plan view of a blade constructed in accordance with the invention shown attached to the dozer head of a tractor indicated in fragment;

FIG. 2 is a front perspective view of the blade shown in FIG. 1;

FIG. 3 is an enlarged top plan view of the blade in fragment and a diagram showing of the approximate progression of the blade through a tree;

FIG. 4 is an enlarged fragmentary perspective view of the shearing and chiselling edges of the blade shown in FIGS. 1 and 2;

FIG. 5 is a front elevational view of FIG. 4;

FIG. 6 is a view similar to FIG. 3 but showing a modified form of blade wherein the chisel edges diminish in width from front to back;

FIG. 7 is a view similar to FIG. 6 but showing a further modified form of blade wherein the spacing of the chisel edges is increased from front to back; and

FIG. 8 is a top plan view similar to FIG. 1 but showing a still further modified form of blade having a plurality of curved sections each having shear and chisel edges.

Referring more particularly to the drawings, wherein like numerals refer to like parts, A designates in its entirety a tractor or bulldozer of any conventional kind including the usual endless driving treads 10 and a forward frame assembly 12 for supporting a moldboard or dozer head 14 which ordinarily is set at an angle of about 25° with respect to the longitudinal axis of the tractor. It is to be understood that the frame assembly 12 may include means for elevating or lowering the dozer head vertically or laterally, none of which is shown in detail because they form no part of the present invention.

Referring now to the features of the invention, the horizontal brush- and tree-cutting blade 16 shown in FIG. 1 having a leading beveled cutting edge is carried forwardly of the dozer head 14. The blade 16 may be welded permanently to the

dozer head or otherwise secured thereto, detachably if desired, in any suitable manner, such as by bolts.

A wedge or stinger 18 having a vertical leading edge 20 may project in front of the forward point of the cutting edge of the blade for splitting trees in known manner and a brace plate 22 for the stinger blade 18 as shown in FIGS. 1 and 2 may be provided if structurally advisable. Desirably, the dozer head 14 also carries an upwardly positioned horizontal bar 24 for pushing the cut trees downwardly and outwardly of the path of the tractor.

The beveled leading shearing cutting edge 26 of the blade 16, the major portion of which preferably is curved laterally and forwardly of the width of the blade, is interrupted at its curved portion by cut out straight chisel edges 28, preferably normal to the longitudinal axis of the tractor and the plane of the stinger 18, which are disposed between the remaining shearing edges 30. Ordinarily, the chisel edges 28 will comprise the minor portion of the cutting edges and the shearing edges 30 comprise the major portion of the cutting edge.

The shearing and chiselling action of the forms of blades contemplated by this invention is illustrated in broken lines in FIG. 3 wherein T represents the tree against which the blade is thrust by the tractor A. The curvature of the left-hand side of the blade produces a couple on the tractor which causes it to rotate counterclockwise and the relative positions of the stinger 18 and the successive shearing and chiselling edges 30 and 28, as the blade progresses through the tree, are indicated at the left- and right-hand sides of FIG. 3, respectively.

In the modified form of blade 32, shown in FIG. 6, the chisel edges 34 between the shearing edges 36 diminish in width from the front toward the back of the blade to provide more effective cutting action should the tractor lose momentum and thrust under its operating conditions, it being understood that a smaller chisel edge requires a smaller force to push it through a tree.

In the further modified form of blade 38, shown in FIG. 7, the spacing of the chisel edges 40 between the shearing edges 42 is increased from the front toward the back for similar reasons and to similar effect since a smaller force is required to push one chisel edge through a tree than to push a plurality of chisel edges.

The further modified form of blade indicated at 44 in FIG. 8 is composed of a plurality of curved sections 46, 48 and 50, or any other desired number, each having any desired arrangement of successive shearing and chiselling edges 52 and 54, respectively.

It is to be understood that the present invention is not confined to the particular forms thereof as herein illustrated and described but embraces all such modifications as may come within the scope of the following claims.

We claim:

1. In a tree-cutting blade for attachment horizontally to the front of the dozer head of a tractor:
 - a leading cutting edge extending substantially the length of said blade;
 - the said cutting edge having a forwardly curved shearing portion; and
 - chisel edges substantially normal to the longitudinal axis of said tractor spaced along a portion of the length of said curved shearing edge.
2. The blade of claim 1 wherein the shearing edge portion comprises the major portion of the curved cutting edge and the chisel edge portion comprises the minor portion of the curved cutting edge.
3. The blade of claim 1 wherein the cutting edge of the blade is curved for the major portion of the length of the blade.
4. The blade of claim 1 wherein selected chisel edges are varied in width.
5. The blade of claim 4 wherein the chisel edges diminish in width from front to back.
6. The blade of claim 1 wherein selected chisel edges are variably spaced.

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7. The blade of claim 6 wherein the spacing of the chisel edges increases from front to back.

8. The blade of claim 1 wherein the cutting edge comprises a plurality of curved portions.

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