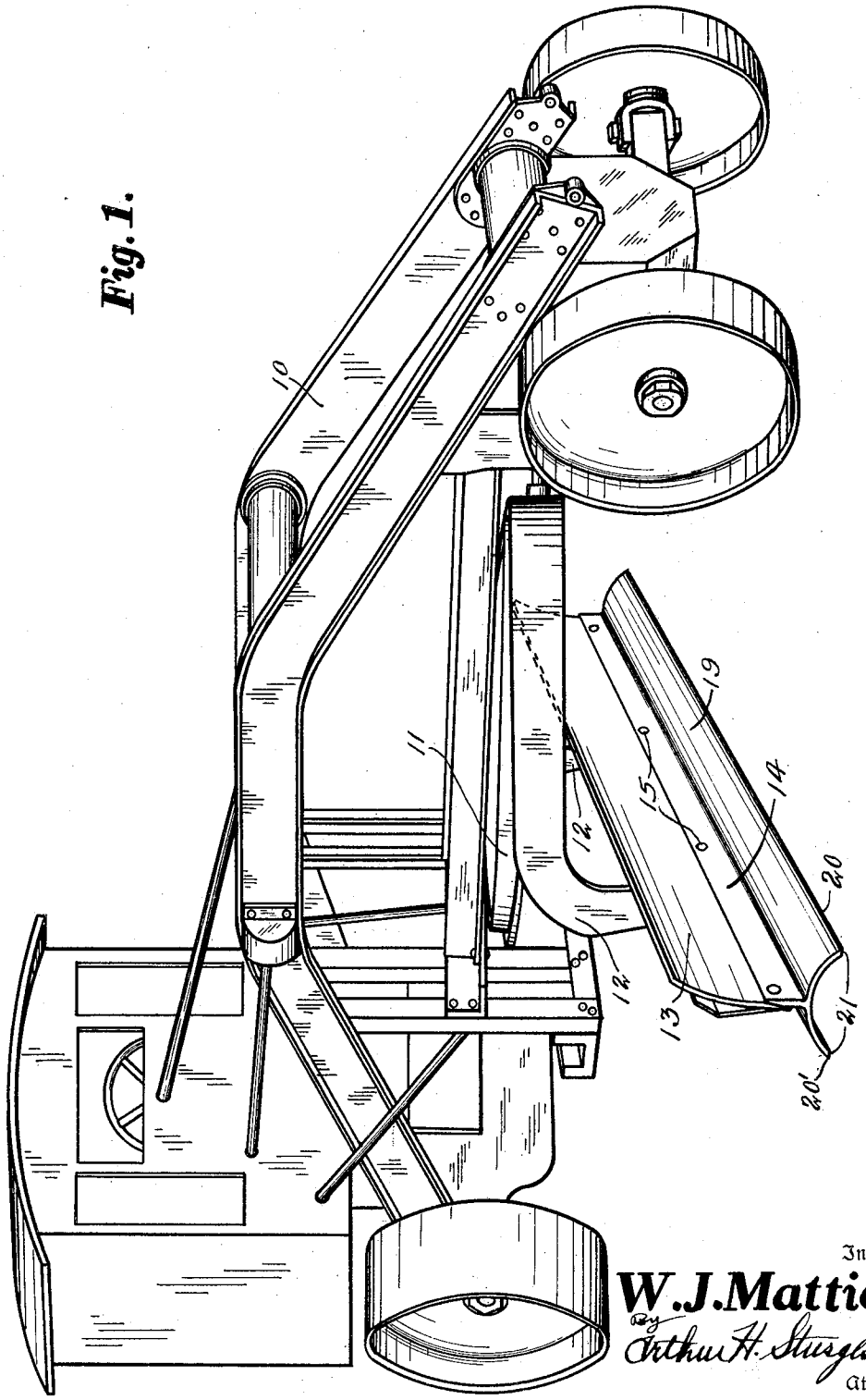
Jan. 17, 1933. W. J. MATTICE 1,894,410

BLADE FOR ROAD MAINTAINERS

Filed Nov. 21, 1931 2 Sheets-Sheet 1

Fig. 1.



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BLADE FOR ROAD MAINTAINERS

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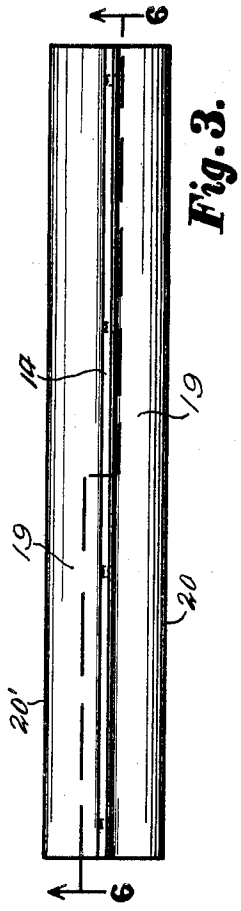


Fig.3.

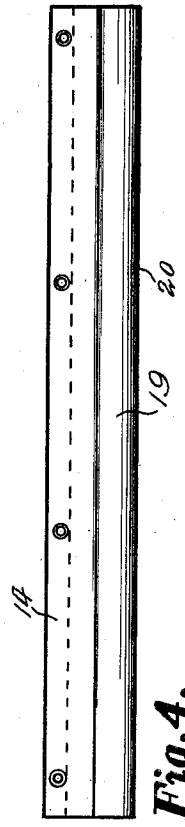


Fig.4.

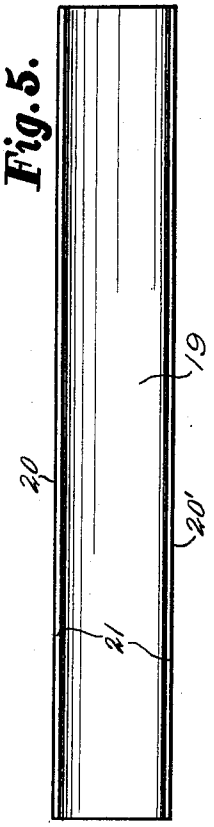


Fig.5.

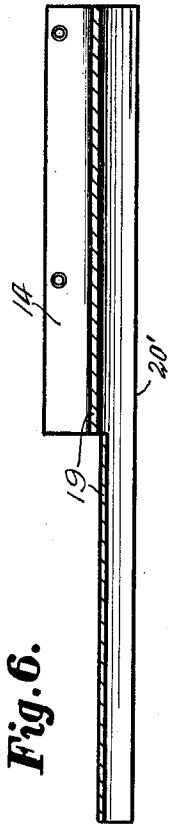


Fig.6.

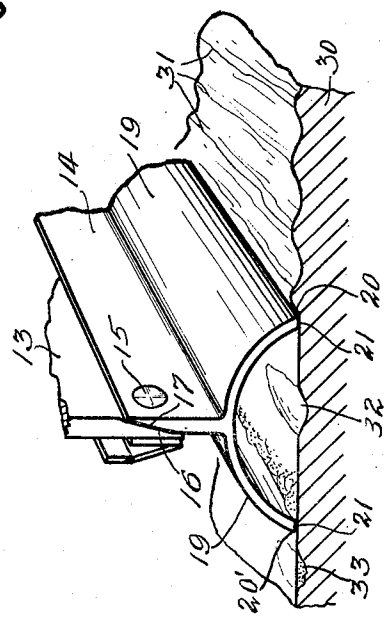


Fig.2.

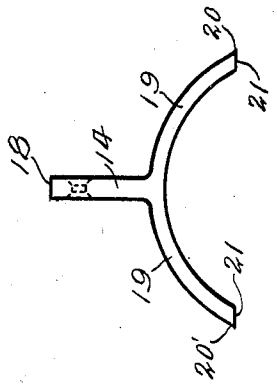


Fig.7.

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UNITED STATES PATENT OFFICE

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BLADE FOR ROAD MAINTAINERS

Application filed November 21, 1931. Serial No. 576,581.

The present invention relates to improvements in planing blades for road maintainers, and has for an object, broadly speaking, to provide such a construction for the earth-moving members of road maintainers that the surface of the ground or roadway will be cut or planed smoothly, and whereby depressions or pockets thereof will be filled.

Another object of the invention is to provide an earth-moving member adapted to plane and uniformly smooth the surface of the road and which is so constructed and adapted for use that it may be employed in connection with road surfacing machines of any type.

A further object of the invention is to provide an earth-moving member for road maintainers consisting of an arcuate planing blade detachably mounted upon a supporting plate in such manner that the blade will have two points or lines of contact upon the roadway to permit reversibility of said contact points, and to provide means whereby said contact points become automatically sharpened in use; this being of advantage in instances where gravel or similar hard substances are encountered on road bed.

A still further and important object of the invention is to provide a scraper or planer blade having two points of contact with the roadway and for this reason of rigid construction, whereby "chattering" of the blade is avoided, insuring smooth cutting and planing of a road bed and eliminating corrugations or rough contours thereof.

A still further object of the invention is to provide an improved scraping blade for road maintainers which will have double contact along spaced parallel lines with the roadway to impart a stabilizing effect to the blade besides giving to it advantages of reversibility and self-sharpening.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended hereto.

In the drawings, wherein like symbols refer to like or corresponding parts throughout the several views,

Figure 1 is a perspective view of a road maintainer showing the improved planing blade applied thereto in a position of use.

Figure 2 is a fragmentary perspective view of the new blade and one form of mounting therefor.

Figure 3 is a top plan view of the improved blade.

Figure 4 is a side elevation of the same.

Figure 5 is a bottom plan view of the improved blade.

Figure 6 is a vertical section taken on the dotted line 6—6 of Figure 3 and looking in the direction of the arrows, and

Figure 7 is an end view of a modified form of blade.

Referring more particularly to the drawings, 10 designates a conventional type of road maintainer incorporating in its construction a horizontal rotatable turntable 11, drop arms 12 carried thereby, a blade 13 supported by the arms 12, and means for raising and lowering the arms 12 and rotating the turntable 11.

Such means may comprise any conventional arrangement of shafts, gears or bell crank levers.

The improved blade according to the present invention consists of a vertically disposed tang 14 having a number of apertures through which bolts, rivets or other fastenings 15 may be passed to permanently or removably secure the tang 14 to the blade 13.

As heretofore practiced in the art, the blade 13 is removable from the arms 12 and reversible, and provided with a sharp cutting edge 16.

The use of such blade imparts a rippled, corrugated or wash-board-like contour to a roadway in that it is susceptible of, and de-

scribes, minute vertical reciprocating movements, being held against the roadway by means of the weight of the arms 12 and blade 13, or engaging against the roadway by means of springs in a well known manner.

In the operation of such machine it is essential that the blade be pressed firmly against the roadway in order to perform the desired cutting and planing operation and in doing so to also be yieldable in the event that a solid immovable obstruction is encountered.

The improved blade is, therefore, provided with a beveled surface 17 to facilitate mating the new blade with the old; or, if desired, the new blade may be provided with a rectangular configuration as indicated at 18 in Figure 7. Figure 7 is otherwise like Figure 2 and the other figures in the case.

Dependent from the tang 14 and preferably integral therewith is an arcuate member or blade 19. As best shown in Figure 7 this arcuate member or blade presents a forward cutting edge 20 and a trailing cutting edge 20′. These cutting edges 20 and 20′ may be reversed.

Adjacent the cutting edges 20 and 20′ are the sole surfaces 21 of the blade 19 which are in contact with the roadway at all times, thus providing two substantially parallel and elongated bearing surfaces of considerable width.

The improved blade 19 is comparatively massive and heavy in construction; and, therefore, while engaged against a road surface, particularly one having gravel embedded therein, the road contact surfaces 21 of the improved blade will become automatically sharpened in use, while at the same time planing off the surface of a road.

In operation, and particularly referring to Figure 2, the roadway is indicated at 30 upon which, forwardly of the blade 19 are shown corrugations 31, which might have been made by the old type blade. As the new blade 19 is driven forwardly over the road surface 30, the forward cutting edge 20 will plane off the upwardly projecting portions of the corrugations 31 and produce a quantity of loose road material such as may pass under the cutting edge 20 and will be engaged against the rear cutting edge 20′, the accumulation being indicated in Figure 2.

Such rear edge 20′, in its forward movement, will dispose this surplus, loose road material into the interstices of the roadway 30, such as the depression indicated at 32; such depression becoming filled and backed after the blade has passed thereover, as indicated at 33.

When the forward cutting edge 20 of the blade 19 becomes dull through use, the blade is reversed bringing the trailing edge 20′ forward, which trailing edge has been undergoing a sharpening process during its continuation at the rear of the blade. By frequent reversals of the blade 19, a sharp forward edge may be always maintained. This sharp forward edge weighed down by the massive and arcuate character of the blade 19 possessing as it does the two edged support on the road is stabilized against any rocking movement communicated to it by its supporting apparatus or by the road maintainer and this stability insures that no corrugations but a smooth surface, will be formed in the roadway or that a previously corrugated roadway will be leveled by striking off the projecting portions and compacting loose portions in the depressions.

From the foregoing description it is thought to be obvious that a blade for road maintainers constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof, and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as herein claimed.

What is claimed is:—

1. An improved blade for scraping roads comprising a massive substantially arcuate body having a supporting tang extending upwardly from approximately the central portion thereof, sole surfaces upon opposite edge portions of the arcuate blade adapted to rest simultaneously upon the road surface to be planed, and sharp reversible cutting edges outwardly of said sole surfaces.

2. An improved blade for scraping roads comprising a substantially arcuate body, a tang extending upwardly from said body, sole supports upon opposite edge portions of the arcuate blade adapted to rest simultaneously upon the surface to be planed, and sharp cutting edges outward of said sole supports, said cutting edges adapted to be reversed whereby a self sharpening cutting edge is presented.

3. In a road maintainer having a blade, a scraper comprising a massive substantially arcuate body, a tang extending upwardly from said scraper for connecting said blade and scraper together, sole supports upon opposite edge portions of the arcuate scraper adapted to rest simultaneously upon the surface to be planed and sharp cutting edges outward of said sole supports, said cutting edges adapted to be reversed whereby a self sharpening cutting edge is presented.

4. In a road maintainer having a blade, a scraping blade comprising a massive substantially arcuate body, a tang extending up-

wardly from said scraping blade, said tang having its inner upper portion beveled for connection to the first mentioned blade, road bearing surfaces on opposite edge portions of said arcuate body, and cutting edges outwardly of said bearing surfaces, said cutting edges adapted to be reversed whereby a self sharpening edge is presented.

In testimony whereof, I have affixed my signature.

WILLIAM J. MATTICE.