

L. M. WILLIAMS.
GRADER AND DITCHER.
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1,015,465.

Patented Jan. 23, 1912.

Fig. 1.

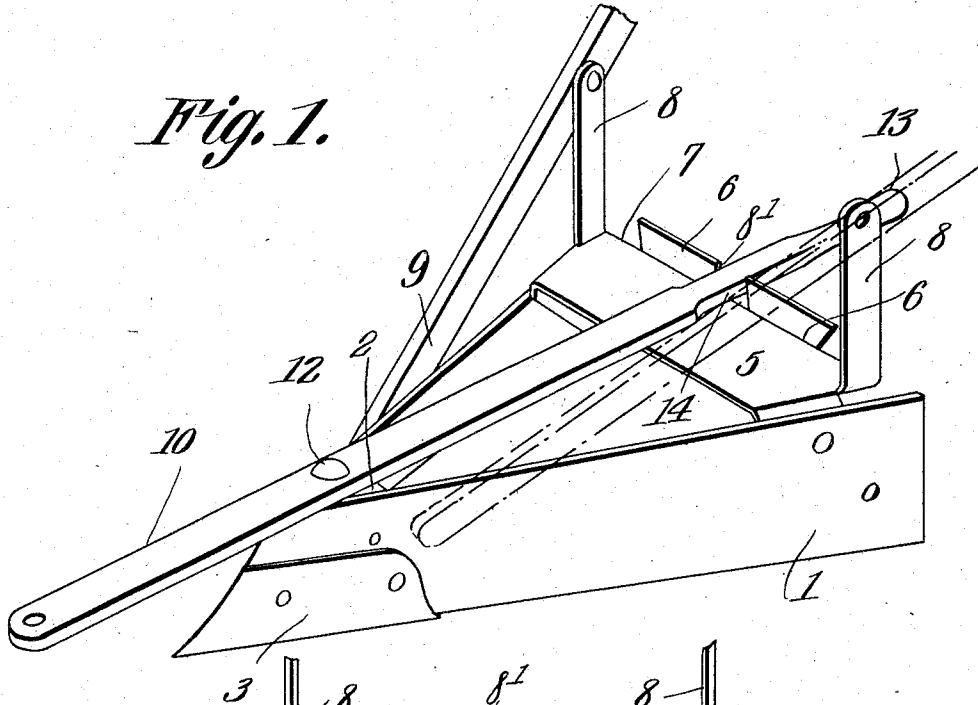


Fig. 2.

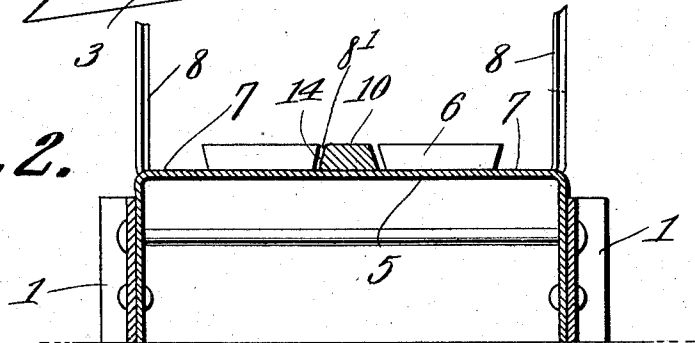
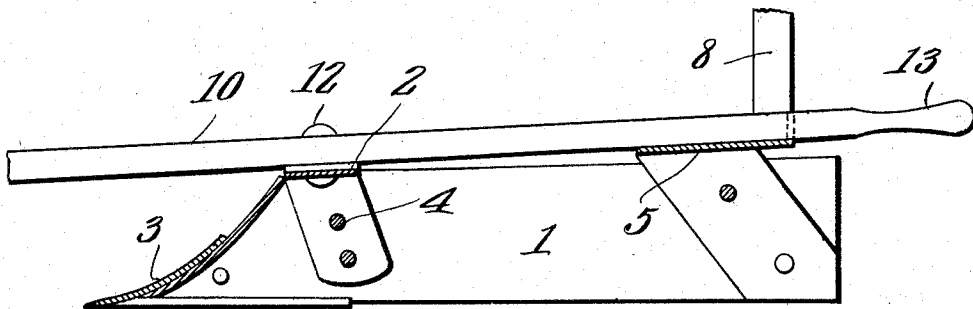


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

LAWSON M. WILLIAMS, OF HENRY, NORTH CAROLINA, ASSIGNOR OF ONE-HALF TO
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GRADER AND DITCHER.

1,015,465.

Specification of Letters Patent.

Patented Jan. 23, 1912.

Application filed February 14, 1911. Serial No. 608,520.

To all whom it may concern:

Be it known that I, LAWSON M. WILLIAMS, a citizen of the United States, residing at Henry, in the county of Catawba and State of North Carolina, have invented a new and useful Grader and Ditcher, of which the following is a specification.

This invention has relation to graders and ditchers and consists in the novel construction and arrangement of its parts as hereinafter shown and described.

The object of the invention is to provide in a grader and ditcher an earth engaging member with a draft means pivotally mounted thereon and adapted to be secured in an adjusted position upon the earth engaging member whereby the said member may serve as means for breaking the ground or means for casting soil to one side or the other.

The device also includes structural details which will be explained hereinafter.

In the accompanying drawings, Figure 1 is a perspective view of the grader and ditcher. Fig. 2 is a transverse sectional view of the same. Fig. 3 is a longitudinal sectional view of the same.

The earth engaging member of the grader and ditcher includes side boards 1 which converge toward each other at their forward ends and meet. A strut 2 is interposed between the forward end portions of the side boards 1 and has an intermediate portion which is consequently at the same level as the upper edges of the boards 1. A point 3 is detachably mounted upon the forward ends of the side boards 1 and bridges the edge at which the forward ends of the said boards meet. A cross bolt 4 passes through the forward end portions of the side boards 1 and also through the opposite end portions of the strut 2 and serves as means for assisting in bracing the forward portion of the earth engaging member.

A strut 5 is interposed between the rear end portions of the side boards 1 and is secured at its ends against the inner faces of the said side boards. The intermediate portion of the strut 5 is slightly elevated with relation to the upper edges of the said side boards 1. The strut 5 is preferably formed from sheet metal and is provided at its rear portion with an upstanding flange 6 which is provided with end recesses 7 and an intermediate recess 8'. The ends of the flange 6

at the said recesses 6 and 7 are undercut for a purpose which will be hereinafter explained. The plate of which the strut 5 is formed is provided in the vicinity of the ends of the said strut with upstanding braces 8 which serve in part as supporting means for handles 9 with which the grader and ditcher is provided.

The draft means 10 is pivoted at a point intermediate its ends upon a stud 12 which in turn is mounted upon the intermediate portion of the strut 2. The rear portion of the beam 10 extends transversely across the strut 5 and is projected beyond the rear end thereof and formed into a handle extremity 13. The opposite edge portions of the beam 10 in the vicinity of the flange 6 formed at the rear edge of the strut 5 are beveled as at 14 and this beveled portion of the said beam is adapted to rest in any one of the recesses 7 and 8 provided in the said flange 6. By reason of the fact that the end walls of the recesses are undercut and the edges of the beam 10 are beveled as at 14 when the said beam is positioned in any particular recess it will be effectually held therein unless removed by one using the handle extremity 13 and swinging the rear end portion of the beam in an upward direction so that its lower surface is carried above the upper edge of the flange 6. When this is done the said beam 10 may be swung upon the stud 12 so that the beam may be positioned in any other recess. By this arrangement it will be seen that when the rear portion of the beam 10 is located in the recess 8' that the said beam is midway between the side boards 1 and therefore the earth engaging member of which the boards 1 and point 3 form component parts may be used as an earth breaking device. When however the rear portion of the beam 10 is seated in one or the other of the recesses 7 in the flange 6 the said beam 10 will be approximately over one of the side boards 1 and remote from the other. Therefore the board from which the beam is remote will serve as means for casting the earth to one side. The point 3 is detachable and may be removed from the forward end portions of the side boards 1 for sharpening or for substitution.

Having described the invention what I claim as new and desire to secure by Letters Patent is:

A grader and ditcher, comprising a mem-

ber made of two converging side boards, a
strut interposed between the rear end por-
tions of the side boards for holding the same
spaced, said strut being provided with two
5 integral rear flanges projecting upwardly
therefrom and providing a central recess,
said strut being further provided with two
upstanding right angled arms at the rear
corners thereof, said arms co-acting with
10 the ends of said flanges to form two recesses
therebetween, and a bar forming a draft
bar for regulating the angle at which the
grader and ditcher is drawn, said bar being

pivoted to the forward end of said side
boards and having its rear end extended 15
rearwardly of the strut and adapted to rest
in either one of said recesses formed by the
flanges of the strut and the upstanding arms.

In testimony that I claim the foregoing as
my own, I have hereto affixed my signature 20
in the presence of two witnesses.

LAWSON M. WILLIAMS.

Witnesses:

M. A. ABERNETHY,
GEO. W. HAHN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."