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SHOVEL FASTENING FOR CULTIVATORS.

APPLICATION FILED SEPT. 13, 1917.

1,250,472. Patented Dec. 18, 1917.

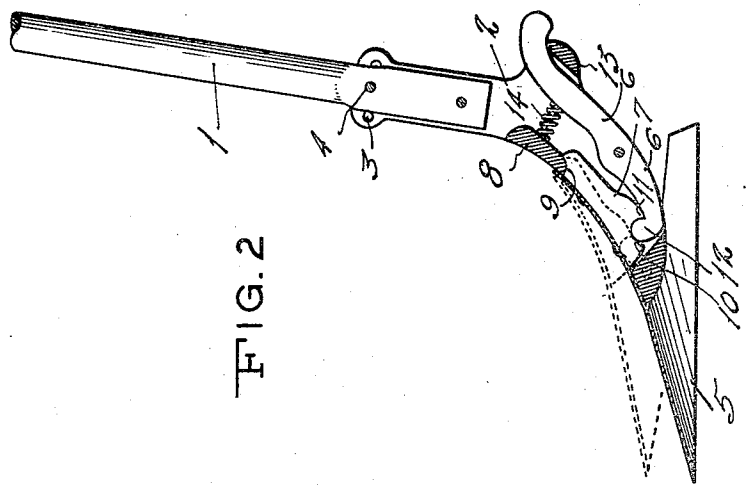


FIG. 2

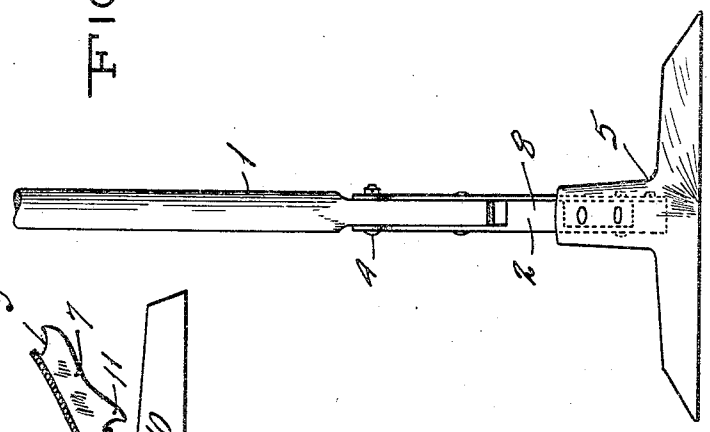


FIG. 1

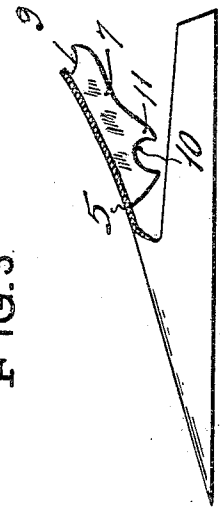


FIG. 3

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SHOVEL-FASTENING FOR CULTIVATORS.

1,250,472. Specification of Letters Patent. Patented Dec. 18, 1917.

Application filed September 13, 1917. Serial No. 191,106.

To all whom it may concern:

Be it known that we, JAMES M. KIRKPATRICK and GROVER C. TIREY, citizens of the United States, residing at Files Valley and Maypearl, respectively, in the counties of Hill and Ellis and State of Texas, have invented certain new and useful Improvements in Shovel-Fastenings for Cultivators, of which the following is a specification.

This invention relates to new and useful improvements in shovel fastenings for cultivators.

Considerable time is lost in removing bolts to change shovels on a cultivator and loss of time means expense and delay in the work.

We have conceived an idea involving the detaching and replacing of cultivator shovels whereby no time would be lost and no tools would be required.

In carrying out the invention we propose to incorporate a spring latch in the cultivator foot and provide each shovel with a lug adapted to enter the foot and engage the latch, whereby it is fastened in the foot.

The invention will be more readily understood from a perusal of the following specification and by reference to the accompanying drawings, in which an example of the invention is illustrated and wherein:

Figure 1 is a front elevation of a foot and shovel constructed in accordance with the invention,

Fig. 2 is a vertical sectional view of the same, and

Fig. 3 is a detail of the shovel removed, showing the latch lug.

In the drawings the numeral 1 designates the standard of a cultivator foot, which standard may be of any approved construction, details not being illustrated.

A foot 2 is pivoted on the lower end of the standard and has a plurality of holes 3 at its upper end disposed radially from the pivot point and receiving a transverse bolt 4 passing through the standard. By this means the point of the shovel may be raised or lowered.

A shovel 5 is provided for the foot and may be in the form of a sweep, round point, narrow point or any other shape. Usually the shovel is attached to the foot by bolts and as these soon rust, the removal of the shovel is a laborious and expensive operation.

We overcome the use of a bolt by employing a spring latch 6 in the foot engaged by a lug 7 fastened on the under or rear side of the shovel. The foot has an opening shaped to receive the lug. A fulcrum boss 8 is provided at the upper end of the opening in the foot which receives the lug. The lug has a seat 9 at its upper end adapted to receive the boss and at its lower end has a notch 10 and a shoulder 11.

In placing the shovel the upper end of the lug is first inserted in the opening of the foot so that the boss 8 is received in the seat 9 whereby a fulcrum is had on which the lug is rocked to bring the shoulder 11 against a knob 12 on the lower end of the latch 6. The shoulder is rounded as well as the knob so that the latter is displaced by the shoulder, the point of which rides over and catches on said knob which is sprung into the notch 10. The latch is pivoted in the foot and is held against a keeper 13 at its upper end by a spring 14. The upper extremity of the latch projects above the keeper.

It will be seen that in placing the shovel it is merely necessary to insert the lug and press on the shovel. To remove the shovel the upper end of the latch 6 is pressed inward whereby the knob is swung out of the notch 10 and lug 7 freed so that the shovel can be lifted off.

The foregoing description and illustration clearly express the invention, but it is to be understood that said illustration is merely an exemplification and the invention may be carried out in various other ways.

What we claim, is:

1. In a cultivator shovel fastening, the combination with a cultivator foot, of a spring pressed latch pivoted in the foot, and a lug for attachment to a shovel, said lug being shaped to enter the foot and engage the latch.

2. In a cultivator shovel fastening, the combination with a cultivator foot and a shovel therefor, of a boss mounted in the foot, a spring pressed latch pivoted in the foot, and a lug mounted on the shovel and shaped to enter the foot, said lug having portions receiving the boss and the latch.

3. In a cultivator shovel fastening, the combination with a cultivator foot and a shovel therefor, of a fulcrum boss mounted in the foot, a spring pressed latch pivoted in the foot and having a knob, and a lug mounted on the shovel having a seat receiving the boss to rock thereon and a shoulder and a notch engaging and receiving the knob of the latch.

In testimony whereof we affix our signatures.

JAMES M. KIRKPATRICK.
GROVER C. TIREY.

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