United States Patent Office.

WILLIAM S. RABB, OF WINNSBOROUGH, SOUTH CAROLINA.

Letters Patent No. 89,242, *dated April* 20, 1869.

IMPROVEMENT IN PLOWS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM S. RABB, of Winnsborough, in the district of Fairfield, and State of South Carolina, have invented an Improved Plow; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification—

Figure 1 being a side view of a plow constructed with my improvement, the various mould-boards and points applicable thereto not being represented.

Figure 2, a top view of the same.

Figure 3, a partial view, showing a modification of the improvement.

Like letters designate corresponding parts in all of the figures.

Let A represent a plow-beam, of any construction, and provided with the usual adjuncts, except the parts to which my invention particularly relates, and which I proceed to describe.

The essential feature of my invention consists in the employment of two (or more) movable feet, or standards, B C, to which mould-boards, wings, or points are attached, so arranged that either may be brought into position for operation while the other is raised out of action, or so that both may be brought into position for action together, substantially in the manner and for the purposes as follows:

I have represented, in figs. 1 and 2, a convenient method of adapting my invention, though I do not confine myself to any special construction.

The feet B C are pivoted at *a*, one on each side of the plow-beam A, as shown, so that either can be raised out of position, as B, and the other brought down into position, as C.

A suitable means of raising and lowering the feet consists in curved guide-arms, or rods, D E, with handles, *d e*, respectively, for operating them, kept in guides, *b c*, on the side of the beam, as indicated.

The curved rods are concentric with the pivot *a* of the feet. They may be held up by any suitable means, and kept in the proper position, when down, by any device, such as the shoulder, or projection *f*, on each, to rest on the beam. In this position, they serve as braces for the feet.

But, to simplify the operation, I prefer to connect the two feet by a chain, or rope, H, the two ends of which are attached respectively to the feet, and which passes up over, or through a notch, loop, or hook, *g*, in, or on an upright, G, secured to the top of the beam, the length of the chain, or rope being such that it will hold one foot up when the other is down in position for operation, so that, when one foot is let down, it draws the other up, and *vice versa*. Then, if it is desired to allow both feet to come down into position for operation together, the chain, or rope H is let down into a lower notch, *h*, or its equivalent, at just the proper height for the purpose.

In fig. 3, a modification of the device is shown, wherein the upright G is low, and the proper extent of movement is allowed to the *rope*, or chain H by extending it forward, and passing it around friction-pulleys, *i*, on the sides of the plow-beam, substantially as represented. This has the advantage of the upright G being shorter and less in the way than the high upright in fig. 1.

Other modifications may be adopted, provided that the principle is preserved.

With these movable feet I use various mould-boards, and points, so as to produce convenient combinations, the principal of which I will here mention.

First, if it is desired to make a hill-side plow, a right mould-board is attached to one foot, C, and a left mould-board to the other foot, B. Thus, at each end of the furrow, the feet are shifted in position, so as to bring first the right and then the left mould-board into operation, and always turn the furrow down hill.

Second, a mould-board and share may be attached to one foot, and a subsoil point to the other, so that, going one way, the furrow can be turned, and, going the other way, the subsoil may be moved. If a man is plowing on a hill-side, with this arrangement the furrows can always be turned down hill, and always to the right, if preferred.

Third, in planting corn, or other seeds, two "bull-tongue" points may be attached to the feet, and both be lowered so as to act together, to cover the corn by throwing a small ridge over it, and leaving it in a proper condition for plowing the first time afterward.

Fourth, in cultivating between the rows of corn, or other plant, a narrow point may be put on one foot, for running close to the plants, and a wider point put on the other, to move the earth in the middle of the intervening space.

Fifth, it may be arranged in another way for cultivating cotton the first time, by using right and left turning-points which work together, the mule, or horse walking on the bed, by which he will not injure the young plants, since they require thinning out in any case.

Other combinations may be adopted, which it is not necessary to particularize, the capabilities of the invention being apparent.

What I claim as my invention, and desire to secure by Letters Patent, is—

The movable feet B C, to which the mould-boards, or points are attached, arranged and operating substantially as and for the purposes herein specified.

The above specification of my improved plow signed by me, this the 24th day of October, 1868.

W. S. RABB.

Witnesses:

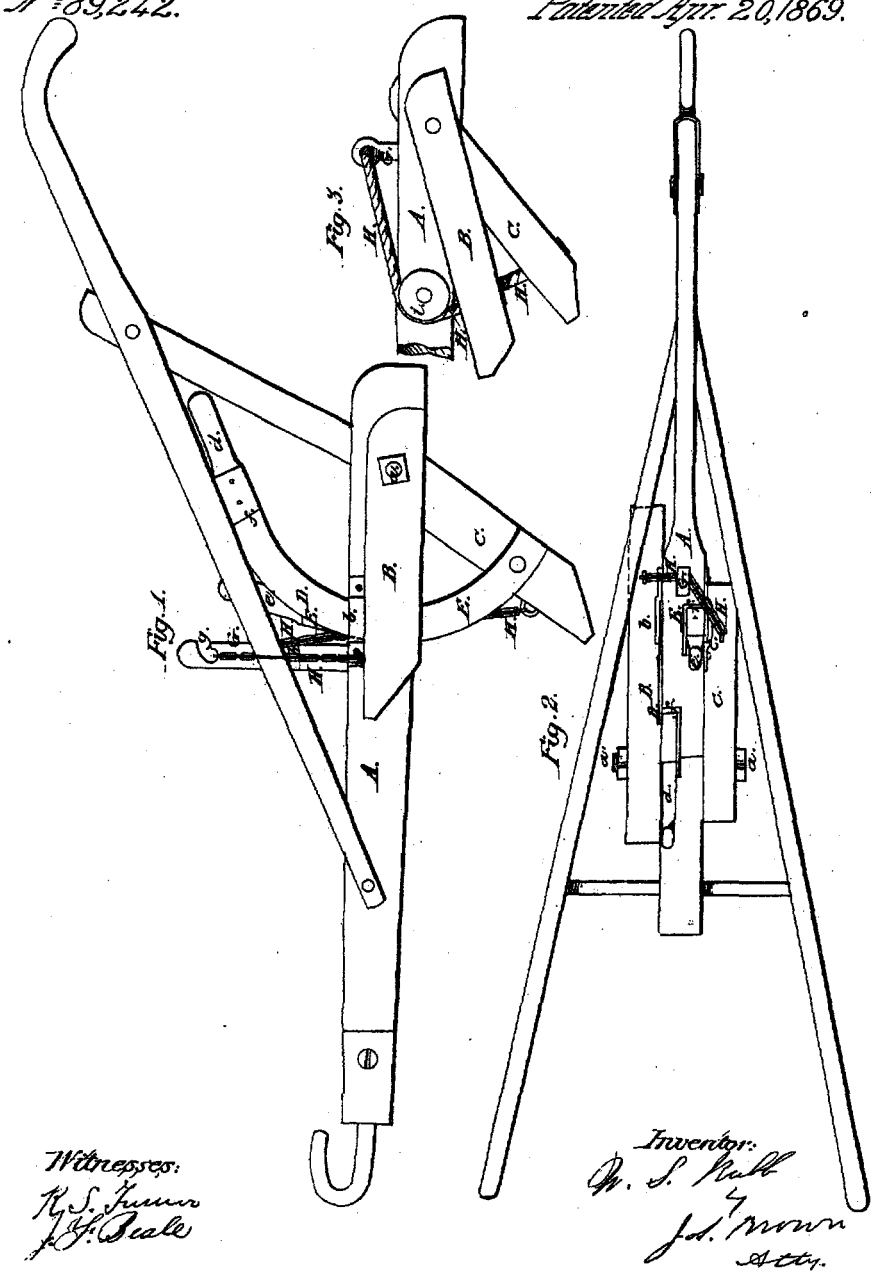
A. S. DOUGLASS,

L. M. BALICK.

W. S. Rabb

Plow.

No 89,242. Patented Apr. 20, 1869.



Witnesses:
K. S. Turner
J. H. Beale

Inventor:
W. S. Rabb
J. L. Brown
Atty.

UNITED STATES PATENT OFFICE.

WILLIAM S. RABB, OF WINNSBOROUGH, SOUTH CAROLINA.

FARM AND GARDEN TOOL.

SPECIFICATION forming part of Letters Patent No. 233,019, dated October 5, 1880.

Application filed March 10, 1880. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. RABB, of Winnsborough, in the county of Fairfield, and in the State of South Carolina, have invented certain new and useful Improvements in Farm and Garden Tools; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a farm and garden tool, as will be hereinafter more fully set forth, and pointed out in the claims.

In the annexed drawings, to which reference is made, and which fully illustrate my invention, Figure 1 is a perspective view of my invention. Fig. 2 is an enlarged section of the same. Fig. 3 is a side view, showing the head reversed. Fig. 4 is a detailed view of one of the tools detached from the head.

A represents the handle of my improved farm and garden tool. This handle has its end slotted longitudinally for a suitable distance, and in this slot is pivoted the head to which the tools are or may be secured. This head, as shown, is composed of two curved bars, B and C, made on suitable circles and connected at their ends; but it is evident that a solid plate may be used, if desired, instead of the circle-bars, though I prefer said bars, because the head can then be made very light, while at the same time it is sufficiently strong and durable.

At each end of the head—that is, at the connections of the bars B C—is formed an arm, D, extending at an angle, as shown, and at the upper or inner end of this arm is an overhanging beveled lip, *a*.

F F represent the tools proper, which are shown as being a hoe-blade and a rake; but I do not confine myself to these two tools or implements alone, nor to any particular size of the tools, as it is, of course, evident that any farm or garden implement, and of any shape or size, may be used in connection with the head B C.

Each tool or implement F is formed or provided with a flat shank, G, which has in its extreme end a slot or notch, *b*, which admits of the shank passing up under the lip *a* and fitting on both sides. A bolt, *d*, is then passed through the shank and through the arm D, and a nut, *e*, screwed on the end of the bolt, which firmly and securely holds the tool in its place. The notch *b* and lip *a* effectually prevent any side movement of the tool or implement, while the bolt, of course, prevents any up-and-down movement. The bar B of the head is the farthest down in the slot of the handle A; Fig. 2, and a bolt, *h*, passing through the center of said bar, pivots the head in the handle. Another bolt, *i*, is passed through the handle close to the inner edge of the outer curved bar, C, and said bolt is tightened sufficiently to obtain the necessary amount of friction on the bar C by the extreme end of the slotted handle.

Supposing, for instance, that a hoe-blade is attached to one end of the head and a rake to the other, the operator can in an instant turn the head on its pivot *h*, reversing the same, and thus use either the one or the other tool, as he may desire. This is of great importance, as it is very often necessary to change tools, maybe, for a minute or so; and with my invention the operator always has two tools on the handle, and by simply reversing the head he can use either one of the two, whereas under ordinary circumstances he would have to lay one down and pick up another, besides the trouble of carrying them about with him.

The head B C is also capable of another use in the following manner: In the bar B of the head, near each end, are made one, two, or more holes, *x*, at any desired distances apart, and in the bar C is a center hole, *y*. By removing the pivoting-bolt *h*, and turning the head over, so that the bar C will be down near the inner end of the slot in the handle, and then passing the bolt *h* through the hole *y* in said bar C, and then taking out the bolt *i* and inserting the same through proper holes in the extreme end of the slotted handle and through either of the holes *x* in the bar B, the head becomes rigidly fastened in the handle, and a shovel, spade, dung-fork, or similar implement may be attached to the head and used in the ordinary manner.

(No Model.)

W. S. RABB.

Farm and Garden Tool.

No. 233,019. Patented Oct. 5, 1880.

Fig. 3.

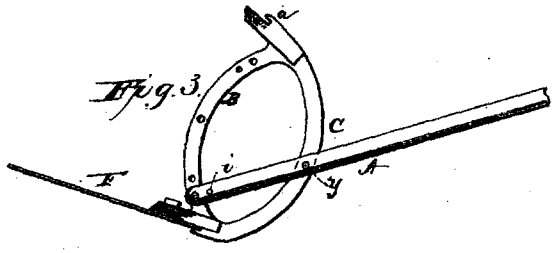


Fig. 1.

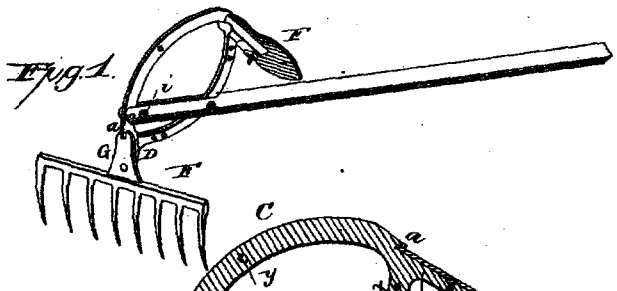


Fig. 2.

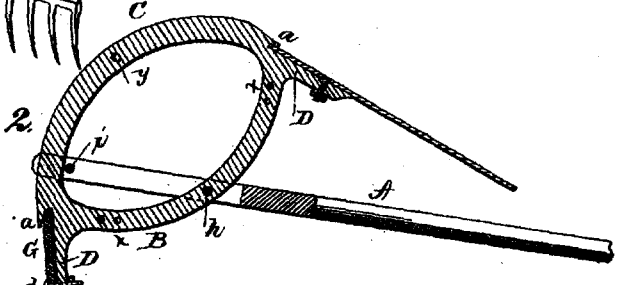
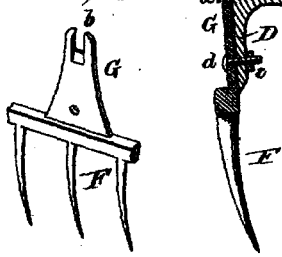


Fig. 4



Witnesses:
Frank L. Durand
H. Aubrey Toulmin.

Inventor:
Wm. S. Rabb
By Alexander Mitchell
Attys.

UNITED STATES PATENT OFFICE.

WILLIAM S. RABB, OF WINNSBOROUGH, ASSIGNOR OF ONE-HALF TO AUGUSTINE T. SMYTHE, OF CHARLESTON, SOUTH CAROLINA.

HOE-BLADE AND FASTENING.

SPECIFICATION forming part of Letters Patent No. 360,619, dated April 5, 1887.

Application filed February 17, 1887. Serial No. 227,907. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. RABB, of Winnsborough, county of Fairfield, and State of South Carolina, have invented a new and useful Improvement in Hoe-Blades and Fastenings, of which I do hereby declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, forming part hereof.

My invention consists in a novel means of detachably connecting a hoe or like implement in the form of a plate or blade to its handle, and in a blade or plate adapted to said connecting device.

In the accompanying drawings, Figure 1 is a sectional view of a hoe embodying my invention. Fig. 2 is a front or plan view of the same. Fig. 3 represents a rake arranged to receive my said connecting device.

Similar letters of reference indicate like parts.

A is a hoe-blade, which I prefer to make, as here shown, square or four-edged. In the center of said blade is a circular opening, in which is secured a disk, B, on which is formed a flange, C. Rivets D, passing through said flange and blade, secure the disk to the said blade. In said disk is a cruciform aperture, E, formed by the intersection of two parallelogram-shaped apertures. In place of making this aperture cruciform, I may make it in the shape of a parallelogram, as shown in Fig. 2. In the blade A, and in line with and opposite the ends of the aperture E, I make openings G H I J.

K is a ring or ferrule adapted to receive the handle R. Upon said ferrule is formed or to it is attached a metal bar, L. At the extremity of said bar L is a bar, M, having at its outer end a circular opening. Also, at the extremity of bar L is a hook, N, having a rectangular notch or recess. The bar M protrudes rearwardly from and at right angles to the hook N.

The ferrule K, bar L, bar M, and hook N are preferably a single casting.

The above-described parts are assembled and connected together as follows: The hook N is inserted through the aperture E in the blade A and adjusted so that the edge of the disk B enters the recess in said hook. The thickness of said disk should be such that the disk will fit snugly in said recess. When this is done, the bar L will stand parallel to the rear side of the blade A, as shown in Fig. 1, and the opening in the end of the bar M will come opposite one of the apertures G H I J in the said blade. A bolt, O, is then inserted through the aperture G (for example) and the opening in the end of bar M, and nut P is applied to the threaded end of said bolt. On setting up the nut P all parts are firmly clamped together. By removing said nut the bolt O can be taken out and the hook N withdrawn from blade A.

It will be apparent that the aforesaid construction enables the blade to be very easily attached or detached from its handle or allows of the easy substitution of one implement for another—such as the rake shown in Fig. 3, for the hoe shown in Fig. 1—upon the same handle. My invention is specially applicable to a hoe, because it allows of the use of a many-edged blade, any edge of which can be brought into the operating position (that occupied by the edge Q, Fig. 1) at will by simply removing the blade and readjusting it upon its handle. The cruciform opening E facilitates this, as the hook N may be caused to engage at any one of the four ends of the openings, and as there are four apertures G H I J, one is always in line with the opening in bar N, so that the clamping bolt and nut may readily be placed in position.

The central disk, B, is not a necessary part of my invention, because I may obviously make the opening E in the blade A itself; but in practice I prefer to employ said disk and make the opening E therein before attaching it to the blade. The opening E, which receives the hook N, may be of any suitable shape to enable said hook to be inserted and adjusted, as described. It may have as many ends or points of attachment for the hook as there are sides or edges to the blade, and of course as many holes G H, &c., will be provided as there are possible places of attachment for the hook.

It will readily be apparent that, in addition to the advantages already named, my invention saves frequent regrinding of the blade, because all four edges of the latter can be used in turn before any sharpening is necessary.

(No Model.)

W. S. RABB.

HOE BLADE AND FASTENING.

No. 360,619. Patented Apr. 5, 1887.

Fig. 1.

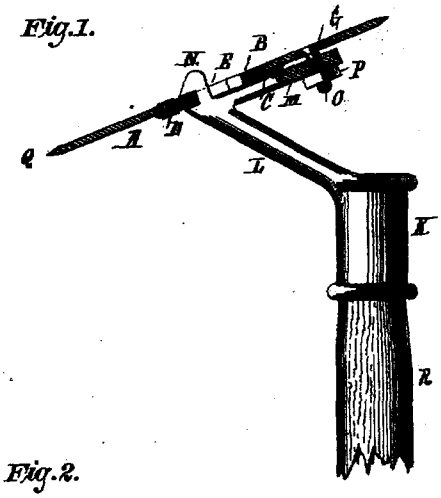


Fig. 2.

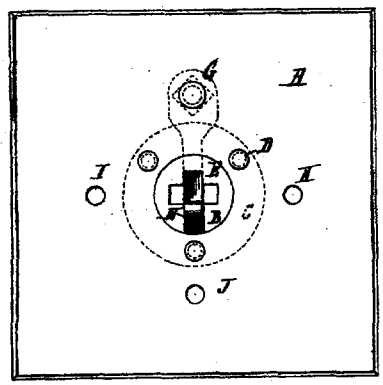
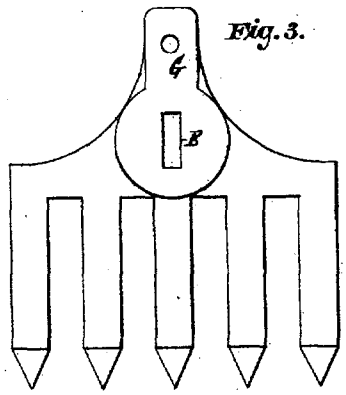


Fig. 3.



WITNESSES:

Gustave Kaiser

Edgar Goodwin

INVENTOR

William S. Rabb

BY Rabb & Benjamin

his ATTORNEY